

# Saving Lives Improving Health

#### **Our Mission**

Diagnostic BioSystems' focus is to provide high quality primary antibodies, detection chemistries, and a wide range of ancillaries and chromogens, complemented with automated IHC Stainers and backed by exceptional customer service and technical support. DBS has more than twenty years of experience in IHC assay development to help pathologists solve their most difficult diagnostic clinical questions.

#### What We Do

Diagnostic BioSystems' main focus is to provide high quality primary antibodies, detection chemistries, and a wide range of ancillaries and chromogens, backed by exceptional customer service and technical support. DBS has more than twenty years of experience in IHC assay development to help pathologists solve their most difficult diagnostic clinical questions.

#### **Manufacturing Accreditations**

Diagnostic BioSystems maintains the highest quality standards and is committed to customer service and support. This commitment is built on a quality system foundation.

Diagnostic BioSystems is an FDA registered medical device manufacturer, operating under FDA 21CFR Part820 Quality System Regulations and is a California Department of Public Health (CDPH) licensed Medical Device Manufacturing facility.

Our facility is also ISO 13485:2016 Certified meeting Quality Management System International Standards. We manufacture IVD/CE marked medical devices for use in the European market.





Catalog Price: \$3.00 US Catalog Item No: GMP-M-0008-F



#### Catalog Quickguide

Find products easily by using this table of contents to identify the relevant product area (Antibody, Detection System etc.) and go to the corresponding page number for the product area. Each section is color coded for ease of use with products listed alphabetically within the section. Products can also be found by using the product index by name in the back of the catalog.

All products are noted with their regulatory designation:

IVD In Vitro Diagnostic Use

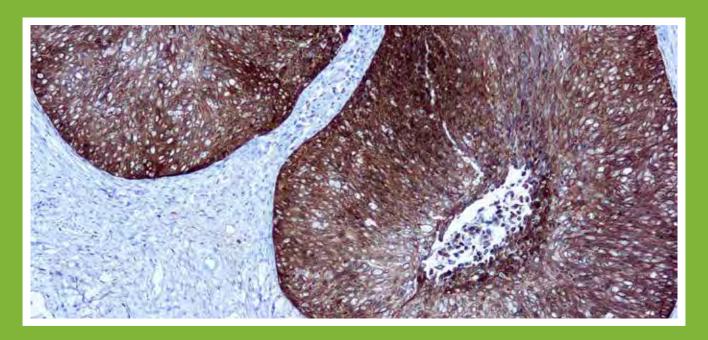
**RUO** Research Use Only



# **Diagnostic BioSystems**

# Primary Antibodies

Diagnostic BioSystems offers a range of ready-to-use and concentrated antibodies optimized to provide high quality staining when used for immunohistochemical applications. Our rabbit monoclonal antibodies are also available for enhanced specificity and sharp signal.



P16 is a mitotic inhibitor protein. It competes with D-type cyclins to bind to cdk4 and cdk6. It acts as tumor suppressor and inhibits the progression of cells through the G1 phase of the cell cycle.

#### **FORMAT AND PACK SIZE:**

**Concentrated Antibodies:** Designed for individuals who want to have more flexibility in their immunostaining protocols. Each antibody is thoroughly quality control tested to cGMP standards. A recommended dilution factor is provided with each antibody.

Pack Size: Concentrated antibodies are available in 0.1ml, 0.5ml and 1ml vials.

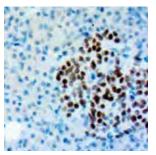
**Prediluted Antibodies:** These antibodies have been quality control tested and require no further dilution or titration.

Pack Size: Prediluted antibodies are available in 6ml and 25ml vials.

# Diagnostic BioSystems

# Featured Antibodies

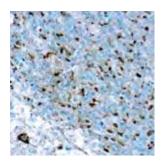
New antibodies developed by Diagnostic BioSystems go through a rigorous development process to ensure the laboratory is provided the right tools for a highly technical, ever changing job. Our products and procedures are validated to the ISO 13485 medical device standard, ensuring lot-to-lot reliability and performance. At Diagnostic BioSystems, we take pride in the quality of our primary antibodies and stand by every product that is shipped from our facility to perform at the highest level of customer satisfaction.



#### INSM1

#### INSM1 (page 51)

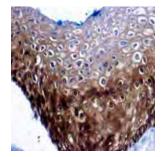
INSM1 (insulinoma-associated protein 1), also known as zinc-finger protein IA-1, is a developmentally regulated zinc finger transcription factor. It localizes to the nucleus and is expressed in embryonic tissues undergoing neuroendocrine differentiation. It plays an important role in neuroendocrine development and is required for normal differentiation of pancreatic endocrine cells.



Pan-TRK

#### Pan-TRK (page 65)

Pan-TRK IHC is a time- and tissue-efficient screen for NTRK fusions, particularly in driver-negative advanced malignancies and potential cases of secretory carcinoma and congenital fibrosarcoma. Pan-TRK IHC can help determine whether translation occurs for novel NTRK rearrangements.



p16 Clone JC2

#### p16 Clone JC2 (page 62)

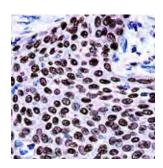
p16 is a tumor suppressor protein that is a cyclin-dependent kinase inhibitor and is essential in regulating the cell cycle. p16 overexpression is a surrogate biomarker of HPV infection (in particular high-risk HPV types), which makes it useful in evaluating HPV-associated squamous and glandular neoplasia of the lower gynecologic tract.



Smad4

#### **Smad4** (page 73)

SMADs are members of the MAD-related family of molecules. Alterations in the SMAD4 gene was primarily discovered in pancreatic cancer (duct adenocarcinoma) but occur in a variety of cancers such as colorectal cancer, gastric cancer, etc... it higher frequencies in gastrointestinal tract cancers. Loss of SMAD4 expression in tumors has also been shown to affect cancer progression and therapy, such as reduced response to adjuvant chemotherapy.



p63

#### p63 (page 64)

p63 is a homolog of the tumor suppressor p53. It is identified in basal cells in the epithelial layers of a variety of tissues, including epidermis, cervix, urothelium, breast and prostate. p63 has also been shown to be a sensitive marker for Lung Squamous Cell Carcinoma (SqCC), with a sensitivity of ~90%. In breast tissue, p63 has been identified in myoepithelial cells of normal ducts.



Treponema Pallidum

#### Treponema Pallidum (page 77)

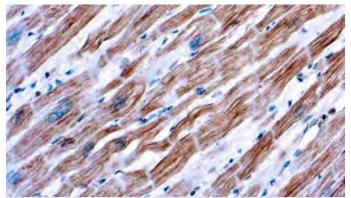
Treponema pallidum is the causative agent of syphilis. It is a gram negative spirochete, a helical to sinusoidal bacterium with outer and cytoplasmic membranes, a thin peptidoglycan layer, and periplasmic flagella.

# **Primary Antibodies**

#### $\alpha$ -Actinin, Sarcomeric

Clone: EA-53

Catalog No.: Mob227 Concentrated



Formalin fixed paraffin embedded human skeletal muscle stained with  $\alpha$ -Actinin, Sarcomeric antibody (Mob227).

**Immunogen:** Purified rabbit skeletal  $\alpha$ -actinin.

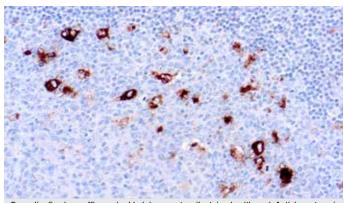
Isotype: IgG1

**Positive Control:** Skeletal muscle **Cellular Localization:** Cytoplasmic

**Specificity:** This antibody is specific for  $\alpha$ -skeletal muscle actinin and  $\alpha$ -cardiac actinin. It stains Z lines and dots in stress fibers of myotubes in skeletal and cardiac muscle but not in non-sarcomeric muscle elements.

#### $\alpha$ -1-Antichymotrypsin

Catalog No.: RP047 Concentrated PDR023 Prediluted



Formalin fixed paraffin embedded human tonsil stained with α.-1-Antichymotrypsin antibody (RP047).

**Immunogen:**  $\alpha$ -1-antichymotrypsin isolated from human serum.

Positive Control: Tonsil

**Cellular Localization:** Cytoplasmic

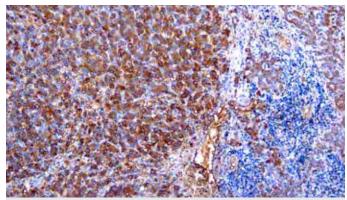
Specificity: The antibody is specific against human  $\alpha\text{-1-antichymotrypsin}.$  This antibody stains monocytes and macrophages in human tissues and

does not stain any other cell type.

#### $\alpha$ -1-Antitrypsin

Catalog No.: RP048 Concentrated PDR021 Prediluted





Formalin fixed paraffin embedded human hepatosarcoma stained with  $\alpha$ -1-Antitrypsin antibody (RP048).

**Immunogen:**  $\alpha$ -1-antitrypsin isolated from human serum.

Positive Control: Tonsil

**Cellular Localization:** Cytoplasmic

**Specificity:** The antibody is specific against human  $\alpha$ -1-antitrypsin. This antibody stains macrophages in human tissues and does not stain any other

cell type.

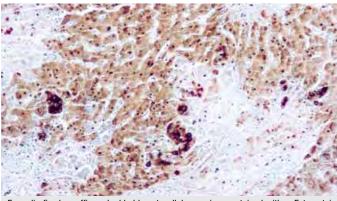
#### $\alpha$ -Fetoprotein (AFP)

Clone: C3

Catalog No.: Mob129 Concentrated PDM057 Prediluted







Formalin fixed paraffin embedded hepatocellular carcinoma stained with  $\alpha$ . Fetoprotein antibody (Mob129).

**Immunogen:** BALB/C mice were injected with purified human  $\alpha$ -fetoprotein.

Isotype: IgG2a

Positive Control: Fetal liver Cellular Localization: Cytoplasmic

**Specificity:**  $\alpha$ -fetoprotein (AFP) is a single chain glycoprotein of 70 kDa that is normally expressed in the fetal liver, gastrointestinal tract and yolk sac. This antibody recognizes an epitope of  $\alpha$ -fetoprotein present in human and several other species.

#### Actin, $\alpha$ -Smooth Muscle

Clone: 1A4

Catalog No.: Mob001 Concentrated PDM003 Prediluted



Immunogen: BALB/C mice were injected with N-terminal decapeptide of  $\alpha\text{-smooth}$  muscle actin.

Isotype: IgG2a, kappa

Muscle antibody (Mob001).

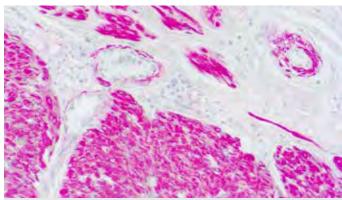
**Positive Control:** Leiomyoma, Colon **Cellular Localization:** Cytoplasmic

**Specificity:** This antibody is specific to  $\alpha$ -smooth muscle isoform of actin. It reacts with smooth muscle cells of vessels and different parenchymes. This antibody does not cross-react with  $\beta$  and  $\gamma$ -cytoplasmic,  $\alpha$ -sarcomeric and  $\alpha$ -myocardial actin isoforms.

#### Actin, Muscle Specific

Clone: HHF35

Catalog No.: Mob002 Concentrated PDM002 Prediluted



Formalin fixed paraffin embedded human large intestine stained with Actin, Muscle Specific antibody (Mob002).

**Immunogen:** BALB/C mice were injected with SDS extracted protein from human myocardium.

Isotype: IgG1, kappa

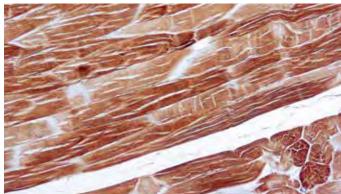
**Positive Control:** Skeletal muscle **Cellular Localization:** Cytoplasmic

**Specificity:** This antibody is specific to  $\alpha$  and  $\gamma$  specific actin isomers from skeletal, cardiac and smooth muscle but does not recognize  $\beta$  and nonsmooth muscle  $\gamma$  actin isomers.

Actin, Sarcomeric

Clone: 5C5

Catalog No.: Mob128 Concentrated PDM099 Prediluted



Formalin fixed paraffin embedded human skeletal muscle stained with Actin, Sarcomeric antibody (Mob128).

**Immunogen:** BALB/C mice were injected with purified rabbit striated muscle actin.

Isotype: IqM

**Positive Control:** Skeletal muscle **Cellular Localization:** Cytoplasmic

**Specificity:** Monoclonal anti- $\alpha$ -sarcomeric actin has been used as a marker for rhabdomyosarcoma. This antibody is specific to  $\alpha$ -skeletal and  $\alpha$ -cardiac muscle actins. It does not react with smooth muscle tissue.

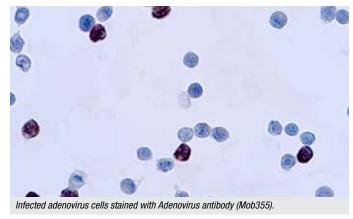
#### Adenovirus

Clone: M58 + M73

Catalog No.: Mob355 Concentrated







Immunogen: BALB/C mice were injected with adenovirus.

**Isotype:** M58, IgG2a, kappa; M73, IgG2a, kappa **Positive Control:** Adenovirus infected tissue

Cellular Localization: Nuclear

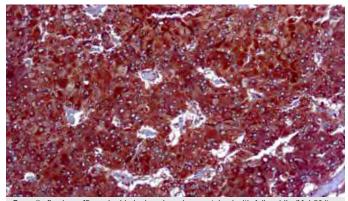
**Specificity:** This antibody reacts with adenovirus. The adenovirus early gene product E1A is a potent stimulator of cellular proliferation, which when overexpressed can overcome the growth-inhibitory effects of TGF- $\beta$ . The E1A region encodes a series of related proteins (35-46 kDa) with multifunctional capabilities and forms a specific complex with the retinoblastoma tumor suppressor gene product. The E1A and E1B regions together comprise the transforming region of adenovirus. While expression of E1A alone is sufficient to immortalize primary cells, complete transformation requires the additional expression of the E1B region.

IVD only for markets outside the U.S. RUO for U.S. market.

#### Adipophilin Clone: DBM15.60

Catalog No.: Mob534 Concentrated

**PDM534 Prediluted** 



Formalin fixed paraffin embedded adrenal carcinoma stained with Adipophlin (Mob534).

**Immunogen:** Recombinant human Adipophilin protein fragment.

Isotype: IgG2b, kappa

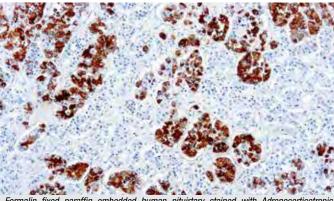
Positive Control: Adrenal gland **Cellular Localization:** Cytoplasmic

Specificity: This protein is associated with the lipid globule surface membrane material, and maybe involved in development and maintenance of adipose tissue. However, it is not restricted to adipocytes as previously thought, but is found in a wide range of cultured cell lines, including fibroblasts, endothelial and epithelial cells, and tissues, such as lactating mammary gland, adrenal cortex, Sertoli Leydig cells, hepatocytes in alcoholic liver cirrhosis, suggesting that it may serve as a marker of lipid accumulation in diverse cell types and diseases.

#### Adrenocorticotropic Hormone (ACTH) (AH26)

Clone: AH26

Catalog No.: Mob244 Concentrated PDM583 Prediluted



Formalin fixed paraffin embedded human pituirtary stained with Adrenocorticotropic Hormone (ACTH) (Mob244).

Immunogen: BALB/C mice were injected with a synthetic peptide corresponding to amino acids 1-24 from the N-terminal of human ACTH.

Isotype: IgG1

**Positive Control: Pituitary** Cellular Localization: Cytoplasmic

Specificity: This antibody is specific to an epitope on the N-terminus of ACTH. This antibody stains corticotrophs in the adenohypophysis and is

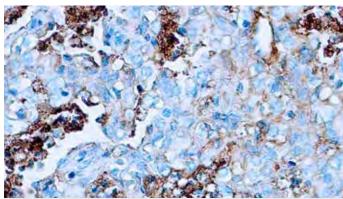
useful in the classification of pituitary adenomas.

#### Albumin

Catalog No.: RP046 Concentrated







Formalin fixed paraffin embedded human liver stained with Albumin antibody (RP046).

Immunogen: Purified human albumin.

Positive Control: Liver

**Cellular Localization:** Cytoplasmic

Specificity: This antibody reacts with human albumin. This antibody is free of other rabbit serum proteins. Specificity is determined by Ouchterlony double diffusion (ODD) and immunoelectrophoresis (IEP) versus human serum and human albumin.

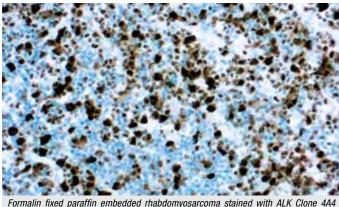
#### ALK (Clone 4A4)

Clone: 4A4

Catalog No.: Mob566 Concentrated **PDM566 Prediluted** 







Immunogen: Recombinant human ALK protein fragment.

Isotype: IqG2b

Positive Control: Anaplastic large cell lymphoma

Cellular Localization: Cytoplasmic and nuclear staining (dot-like)

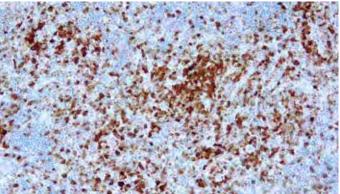
Specificity: Anaplastic lymphoma kinase (ALK) known as ALK tyrosine kinase receptor or CD246, is a tyrosine kinase receptor. ALK is an important

biomarker for diagnosis of non-small cell lung cancer (NSCLC).

#### ALK/p80 (Anaplastic Lymphoma Kinase)

Clone: 5A4

Catalog No.: Mob416 Concentrated



Formalin fixed paraffin embedded anaplastic lymphoma kinase stained with ALK/p80 antibody (Mob416).

Immunogen: Prokaryotic recombinant protein corresponding to a region which spans the tyrosine kinase catalytic domain and part of the C-terminus of NPM-ALK transcript (419-520 aa).

Isotype: IgG1

Positive Control: Anaplastic lymphoma

Cellular Localization: Cytoplasmic and/or nuclear

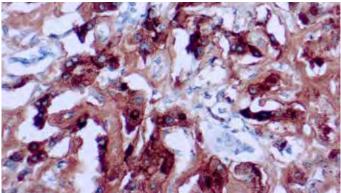
Specificity: Anaplastic large cell lymphoma (ALCL) is usually composed of large pleomorphic cells, which express CD30 antigen and the epithelial membrane antigen (EMA). These tumor cells tend to occur in younger patients and may be associated with cutaneous and extranodal involvement. Large cell lymphoma account for approximately 25% of all non-Hodgkin lymphomas in children and young adults.

IVD only for markets outside the U.S. RUO for U.S. market.

#### Amyloid A Component

Clone: mcl

Catalog No.: Mob003 Concentrated **PDM118 Prediluted** 



Formalin fixed paraffin embedded human amyloidosis stained with Amyloid A Component antibody (Mob003).

Immunogen: Human amyloid A protein coupled to horseradish peroxidase

and kininogen. Isotype: IgG2a, kappa

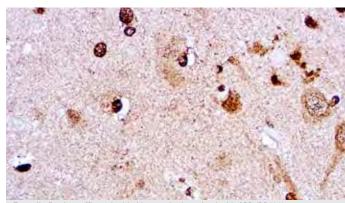
Positive Control: Kidney

Cellular Localization: Extracellular

**Specificity:** This antibody reacts with amyloid deposits in all organs and tissues. It reacts specifically with amyloid A protein in the native fibrils as well as fixed fibrils but does not show any reactivity with non-amyloid A fibril protein.

#### **Amyloid Precursor Protein (APP)**

Catalog No.: RP123 Concentrated



Formalin fixed paraffin embedded human brain stained with APP (RP123).

**Immunogen:** A synthetic peptide corresponding to C-terminal of human APP.

Positive Control: Brain

Cellular Localization: Cytoplasmic, extracellular

Specificity: This antibody reacts with a 95-100 kDa protein. This antibody recognizes amyloid precursor proteins APP695, APP751 and APP770. Amyloid precursor protein and APP—like proteins are transmembrane glycoproteins with a similar modular domain structure.

#### **β-Amyloid Protein**

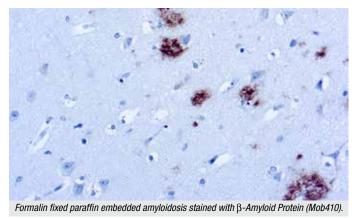
Clone: BAM-10

Catalog No.: Mob410 Concentrated









**Immunogen:** A synthetic β-amyloid peptide (1-40) conjugated to KLH.

Isotype: IgG1

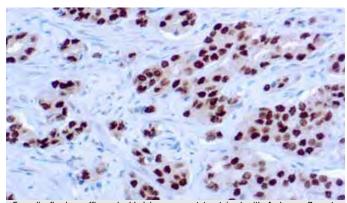
Positive Control: Brain, Amyloidosis **Cellular Localization:** Cytoplasmic

**Specificity:** This antibody reacts with  $\beta$ -amyloid protein. This antibody stains amyloid plagues within the cortex and amyloid deposits in blood vessels. B-amyloid deposits are also detected in Lewy body dementia. Down syndrome, amyloidosis and, in Gram-Parkinson dementia complex. The presence of a large number of neuritic plagues (senile) and neurofibrillary tangles in the cerebral cortex is used as a pathological marker for a disease state and presents the major criterion for the diagnosis of Alzheimer's disease at autopsy.

#### Androgen Receptor

Clone: AR 441

Catalog No.: Mob245 Concentrated PDM167 Prediluted



Formalin fixed paraffin embedded human prostate stained with Androgen Receptor antibody (Mob245).

**Immunogen:** BALB/C mice were injected with a synthetic peptide corresponding to the human androgen receptor.

Isotype: IgG1

Positive Control: Prostate carcinoma Cellular Localization: Nuclear

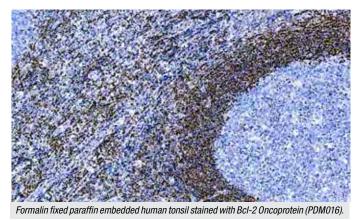
**Specificity:** This antibody is specific to a protein of 110 kDa, identified as androgen receptor. This antibody reacts with full length AR and also with the newly described A form of the receptor. This antibody does not cross-react

with estrogen, progesterone or glucocorticoid receptors.

#### Bcl-2 Oncoprotein

**Clone: 124** 

Catalog No.: Mob005 Concentrated PDM016 Prediluted



**Immunogen:** Recombinant bcl-2 peptide sequence comprising of 51-54 amino acids of bcl-2 oncoprotein.

Isotype: IgG1, kappa
Positive Control: Tonsil

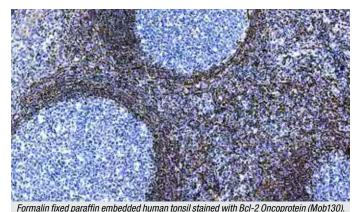
Cellular Localization: Cell membrane

**Specificity:** This antibody is specific to bcl-2 oncoprotein, encoded by a gene involved in the 14;18 chromosomal translocation. In lymphoid tissues, this antibody stains B lymphocytes as well as T cells.

**Bcl-2 Oncoprotein** 

Clone: 100/D5

Catalog No.: Mob130 Concentrated PDM209 Prediluted



Tormanii nxeu paranin embeuded numan tonsh stamed with bol-2 oncoprotein (wobro

**Immunogen:** BALB/C mice were injected with synthetic bcl-2 peptide.

Isotype: IgG1

Positive Control: Tonsil

**Cellular Localization:** Cell membrane

**Specificity:** The bcl-2 product is considered to act as an inhibitor of apoptosis. Bcl-2 expression is inhibited in germinal centers where apoptosis forms part of the B cell production pathway. Reactive follicles show no staining for bcl-2, whereas the cells in neoplastic follicles exhibit membrane staining. Bcl-2  $\alpha$  oncoprotein has been shown to inhibit apoptosis.

#### **Bcl-6 Oncoprotein**

Clone: LN22

Catalog No.: Mob468 Concentrated PDM176 Prediluted



Formalin fixed paraffin embedded human tonsil stained with Bcl-6 antibody (Mob468).

Immunogen: Recombinant protein from the N-terminus of human Bcl-6.

Isotype: IgG2b
Positive Control: Tonsil
Cellular Localization: Nuclear

**Specificity:** This antibody reacts with the Bcl-6 gene product in follicular lymphomas, diffuse large B cell lymphomas, Burkitt's lymphomas, and in nodular, lymphocyte predominant Hodgkin's disease. Bcl-6 is a protoncogene that encodes Kruppel-type Zinc-finger protein of 95 kDa and shares homology with transcription factor. Bcl-6 is mainly expressed in normal germinal center B cells and related lymphomas.

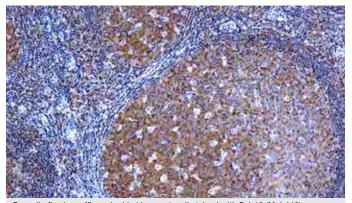




Bcl-10 Clone: 151

Catalog No.: Mob442 Concentated

PDM442 Prediluted



Formalin fixed paraffin embedded human tonsil stained with Bcl-10 (Mob442).

Immunogen: Human recombinant Bcl-10

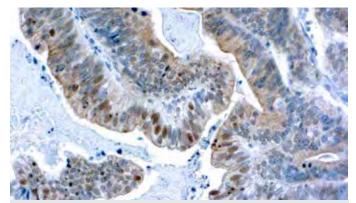
Isotype: IgG1

Positive Control: Tonsil **Cellular Localization: Nuclear** 

**Specificity:** Monoclonal anti-bcl-10 reacts specifically with human bcl-10. The epitope recognized by the antibody resides within amino acids 122-168 of human bcl-10 molecule. Bcl-10, also designated as CIPER, mE10, cE10, CARMEN, and CLAP, is an N-terminal CARD (caspase recruitment domain) containing protein. It is a cellular homologue of the equine herpesvirus-2 protein E-10 (vCLAP). Bcl-10 was implicated in the regulation of apoptosis by interacting with caspase 9, enhancing procaspase 9 processing, and triggering its activation when overexpressed in the cell. Bcl-10 cellular overexpression induces JNK, p38, and NF-kB activation. Deregulation of bcl-10 expression was also demonstrated to be involved in cellular oncogenesis.

**BRCA1** Clone: GLK-2

Catalog No.: Mob424 Concentrated



Formalin fixed paraffin embedded ovarian cancer stained with BRCA1 antibody (Mob424).

Immunogen: Peptide corresponding to amino acids 1839-1863 of the C-terminus of BRCA1.

Isotype: IgM, kappa

Positive Control: Ovarian carcinoma **Cellular Localization:** Cytoplasmic

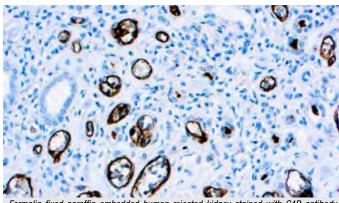
Specificity: BRCA1 recognizes a 22kDa protein. This antibody stains 94% of ovarian carcinomas with a mutation in exon 11. However, staining was absent in 100% of tumors with mutations other than exon 11.

IVD only for markets outside the U.S. RUO for U.S. market.



Clone: C4D204

Catalog No.: Mob471 Concentrated PDM184 Prediluted



Formalin fixed paraffin embedded human rejected kidney stained with C4D antibody (Mob471).

Immunogen: A recombinant fragment specific to Complement 4d.

Isotype: Mouse IgG1

Positive Control: Rejected Kidnev

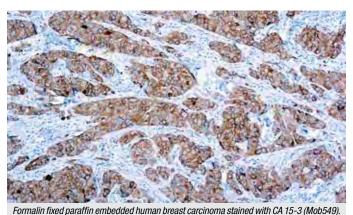
**Cellular Localization:** Membrane Cytoplasm

Specificity: Complement 4d (C4d) is the most clinically used marker for humoral rejection. It is a degradation product of the activated complement factor C4b. Complement 4d is typically initiated by binding of antibodies to specific target molecules. Following activation and degradation of the C4 molecule, thio-ester groups are exposed, which allow transient, covalent binding of the degradation product complement 4d to endothelial cell surfaces and extracellular matrix components of vascular basement membranes near the sites of C4 activation. Complement 4d is also found in intracytoplasmic vacuoles of endothelial cells. Covalent binding renders C4d a stable molecule that can easily be detected by immunohistochemistry.

CA 15-3

Clone: DBMM1

Catalog No.: Mob549 Concentrated PDM549 Prediluted



Immunogen: Human breast cancer cell line ZR-75-1.

Isotype: IgG1, kappa

Positive Control: Breast carcinoma

Cellular Localization: Cytoplasmic, cell membrane

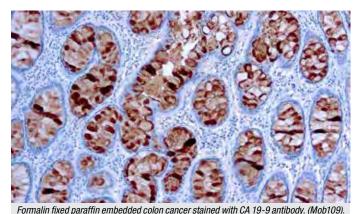
Specificity: This antibody is specific to epithelial membrane antigen (EMA), CA 15-3, or polymorphic epithelial mucin. This antibody stains an underglycosylated MUC1 often present on carcinoma cells.



CA 19-9 Clone: C241:5:1:4

Catalog No.: Mob109 Concentrated





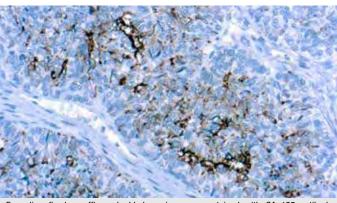
**Immunogen:** Human colorectal adenocarcinoma cell line COLO 205.

Positive Control: Colon carcinoma **Cellular Localization:** Cytoplasmic

Specificity: This antibody reacts specifically with sialyl Lewisa and recognizes an epitope being designated CA 19-9. It does not cross-react with Lewis A and Lewis B. CA 19-9 has been shown to be useful marker in the diagnosis and management of gastrointestinal cancers.

**CA 125** Clone: 0V185:1

Catalog No.: Mob110 Concentrated PDM323 Prediluted



fixed paraffin embedded ovarian cancer stained with CA 125 antibody. Formalin (Mob110).

Immunogen: Partially purified human mucin fraction from a pool of cancer tissues of patients with epithelial ovarian cancer.

Isotype: IgG1

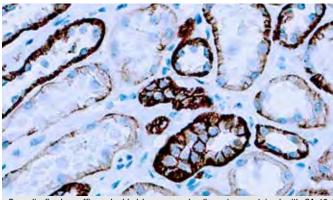
Positive Control: Ovarian carcinoma

Cellular Localization: Extracellular membrane

Specificity: This antibody reacts specifically with CA 125 ovarian cancer antigen. Several studies have shown that CA 125 is a useful tumor marker for ovarian epithelial malignancies. However, CA 125 has been described in other neoplasms such as seminal vesicle and anaplastic lymphomas.



Catalog No.: Mob228 Concentrated



Formalin fixed paraffin embedded human renal cell carcinoma stained with CA 19-9 antibody. (Mob228).

Immunogen: Synthetic peptide corresponding to the C-terminal amino acids of chicken N-cadherin with extra N-terminal lysine residue.

Isotype: IgG1

Positive Control: Tonsil

**Cellular Localization:** Cell membrane

Specificity: This antibody reacts with pan cadherin with a distinct 135 kDa band from a wide variety of tissues. Cadherins are members of a multigene family of single chain glycoprotein receptors mediating Ca2+ dependent cellcell adhesion.

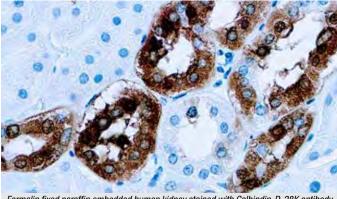
Calbindin-D-28K

Clone: CB-955

Catalog No.: Mob554 Concentrated







Formalin fixed paraffin embedded human kidney stained with Calbindin-D-28K antibody.

Immunogen: Purified bovine kidney calbindin-D-28K.

Isotype: IqG1

Positive Control: Kidney

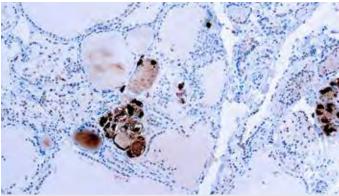
**Cellular Localization:** Cytoplasmic, cell membrane

**Specificity:** This antibody is specific to a protein of 28 kDa. Calbindin-D-28K is also known as vitamin D-dependent calcium-binding protein or cholecalcin. Calbindin D-28K has a broad tissue distribution; however it exhibits a cell type-specific expression pattern. This antibody reacts specifically with calbindin-D-28K in brain and kidney tissues.

#### Calcitonin

Catalog No.: RP050 Concentrated





Formalin fixed paraffin embedded human thyroid stained with Calcitonin antibody

Immunogen: Synthetic peptide of human calcitonin corresponding to amino acids 1-32.

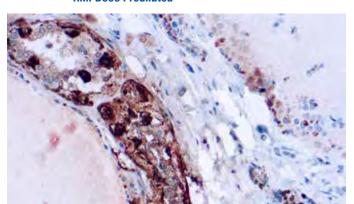
Positive Control: Thyroid

**Cellular Localization:** Cytoplasmic

**Specificity:** This antibody stains C cells of the thyroid. Staining for calcitonin may be used for the identification of a spectrum of C cell proliferative abnormalities ranging from C cell hyperplasia to invasive tumors.

Calcitonin Clone: SP17

Catalog No.: RMAB009 Concentrated RMPD009 Prediluted



Formalin fixed paraffin embedded human thyroid medullary carcinoma stained with Calcitonin antibody (RMAB009).

Immunogen: Synthetic human calcitonin 1-32 amino acid peptide.

Isotype: IqG

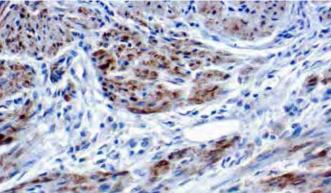
Positive Control: Thyroid or medullary carcinoma

**Cellular Localization:** Cytoplasmic

Specificity: This antibody recognizes calcitonin, a 32 amino acid peptide, which can be demonstrated in C cells of the normal and hyperplastic thyroid. Staining for calcitonin may be used for the identification of a spectrum of C cell proliferative abnormalities ranging from C cell hyperplasia to invasive tumors. Staining for calcitonin in medullary carcinoma of the thyroid produces a fine granular pattern in the cytoplasm. Amyloid deposits within the tumor may also exhibit varying degrees of calcitonin activity.

Caldesmon Clone: hHCD

Catalog No.: Mob556 Concentrated PDM223 Prediluted



Formalin fixed paraffin embedded endometrial cancer stained with Caldesmon antibody (Moh556)

Immunogen: BALB/C mice were injected with human uterus smooth muscle extract.

Isotype: IgG1

Positive Control: Endometrial cancer **Cellular Localization:** Cytoplasmic

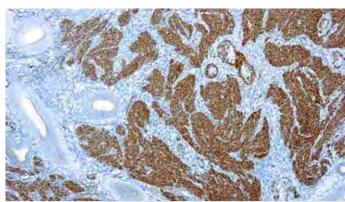
Specificity: This antibody is specific to high molecular weight (120-150 kDa) h-caldesmon. Caldesmon is involved in smooth muscle and nonmuscle contraction. Two closely related variants of human caldesmon have been identified. The h-caldesmon variant is predominantly expressed in smooth muscle, whereas I-caldesmon (71-80 kD) is found in non-muscle tissue and cells.

#### Calponin-1

IVD

Clone: CALP (same as hCP)

Catalog No.: Mob345 Concentrated PDM219 Prediluted



Formalin fixed paraffin embedded human uterus stained with Calponin antibody (Mob345).

Immunogen: BALB/C mice were injected with crude human uterus extract.

Isotype: IgG1

Positive Control: Breast

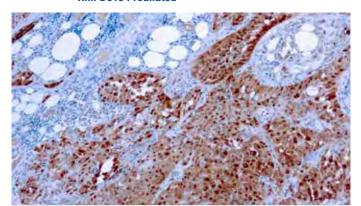
**Cellular Localization:** Cytoplasmic

**Specificity:** This antibody reacts with a 34 kDa protein known as calponin. Calponin, a calmodulin, binds tropomyosin and F-actin and is thought to be involved in the regulation of smooth muscle contraction. Expression of calponin is restricted to smooth muscle cells. Two isoforms of calponin exist whose molecular weights are 34 kDa and 29 kDa. 29 kDa isoform is primarily restricted to the muscle of the urogenital tract.



#### Calretinin Clone: SP13

Catalog No.: RMAB010 Concentrated **RMPD010 Prediluted** 



Formalin fixed paraffin embedded human mesothelioma stained with Calretinin antibody (RMAB010).

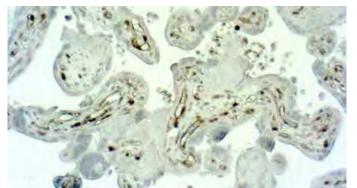
Immunogen: Recombinant full-length mouse calretinin protein.

Isotype: IgG

Positive Control: Mesothelioma **Cellular Localization:** Cytoplasmic

Specificity: This antibody recognizes a 31.5 kDa protein named calretinin. Calretinin is an intracellular calcium-binding protein belonging to the troponin C superfamily and is characterized by a structural motif described as the EFhand domain. The immunohistochemical detection of calretinin in developing cerebellum is restricted to the later stages indicated by weak staining from week 21 of gestation in Purkinje and basket cells and in neurons of the dentate nucleus. The intensity of staining increases as the cerebellum matures. In tumors, calretinin has been detected in mesotheliomas and some pulmonary adenocarcinomas.

Caspase 1 Catalog No.: RP175 Concentrated **PDR175 Prediluted** 



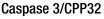
Immunogen: Caspase1 (1-250aa) protein.

Positive Control: Placenta

Cellular Localization: Nuclear, cell membrane

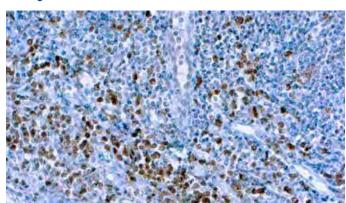
**Specificity:** Caspase 1 and is expressed as a proenzyme in many tissues. Active Caspase 1 is a tetramer of two subunits p10 and p20 in 2:2 ratio. Overexpression of caspase 1 can induce apoptosis in fibroblast, which can be inhibited by overexpression of Crm A, a protein from pox virus.

Formalin fixed paraffin embedded human Placenta stained with Caspase 1 (RP175).



Clone: 3CSP03

Catalog No.: Mob309 Concentrated



Formalin fixed paraffin embedded human tonsil stained with Caspase 3/CPP32 antibody (Mob309).

Immunogen: BALB/C mice were injected with recombinant full length

human caspase 3 protein.

Isotype: IqG2a

Positive Control: Tonsil

**Cellular Localization:** Cytoplasmic

Specificity: This antibody is specific to a 32 kDa protein. Caspase 3 is associated with induction of apoptosis. Caspase 3 is ubiquitously expressed and is synthesized as an inactive proenzyme.

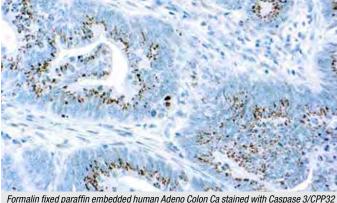
IVD only for markets outside the U.S. RUO for U.S. market.

Caspase 3/CPP32

Catalog No.: RP096 Concentrated **PDR172 Prediluted** 







Immunogen: A synthetic peptide corresponding to the cleavage site of human caspase 3 (amino acids 167-175), conjugated to KLH.

Positive Control: Tonsil

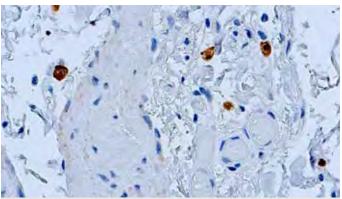
Cellular Localization: Cytoplasmic, some nuclear

**Specificity:** This antibody reacts with the active form of caspase 3 (17) kD protein). Caspase 3 is a member of the interleukin-1 beta-converting enzyme family and is thought to be associated with the induction of apoptosis. Caspase 3 is synthesized as an inactive 32 kD proenzyme and is processed during apoptosis generating two subunits of 17 kD and 12 kD. Caspase 3 stains the epithelial cells of skin, renal proximal tubules, and collecting ducts.

IVD only for markets outside the U.S. RUO for U.S. market.

#### Caspase 8/FLICE

Catalog No.: RP097 Concentrated



Formalin fixed paraffin embedded human stomach stained with Caspase 8 antibody (RP097).

Immunogen: Recombinant full-length human caspase 8 protein.

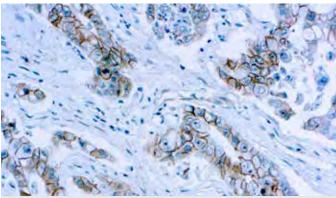
**Positive Control:** Stomach **Cellular Localization:** Cytoplasmic

**Specificity:** This antibody reacts with a 55 kDa protein. Caspase 8 has an N-terminal domain with sequence homology to the death effector domain (DED) of FADD. Caspase 8 binds to DED of FADD. Caspase 8 is activated by association with Fas/FADD death-inducing signaling complex to release two active subunits, p18 and p10, into the cytosol, where they activate other caspases, amplifying the apoptotic signal.

IVD only for markets outside the U.S. RUO for U.S. market.

#### Catenin, $\beta$

Catalog No.: RP080 Concentrated PDR060 Prediluted



Formalin fixed paraffin embedded human lung carcinoma stained with Catenin  $\beta$  antibody (RP080).

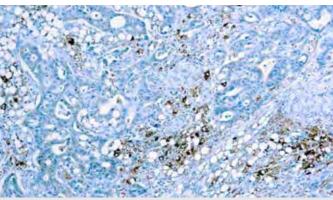
**Immunogen:** A synthetic peptide derived from the C-terminus of human  $\beta$ -catenin protein.

**Positive Control:** Breast carcinoma, Large intestine **Cellular Localization:** Cytoplasmic, cell membrane

**Specificity:** This antibody reacts with a 92 kDa protein known as  $\beta$ -catenin. The catenins ( $\alpha$ ,  $\beta$  and  $\gamma$ ) are ubiquitously expressed cytoplasmic proteins, which are associated with E-cadherin.  $\beta$ -catenin can also bind to APC. Cadherin/catenin complexes are linked to the cytoskeleton via a direct association between  $\alpha$ -actinin and  $\alpha$ -catenin.

#### Cathepsin D

Catalog No.: RP004 Concentrated PDR004 Prediluted



Formalin fixed paraffin embedded human prostate stained with Cathepsin D antibody (RPOO4)

**Immunogen:** Cathepsin D isolated from human liver. **Positive Control:** Breast carcinoma, Prostate

**Cellular Localization:** Cytoplasmic

**Specificity:** This antibody reacts with the zymogen as well as the activated form of cathepsin D. It stains fibroblasts and macrophages strongly but stains weakly with the myoepithelial cells of breast. It stains the sweat ducts and glands in the skin, islets cells, and granules of pancreatic acini.

#### CD1a Clone: 010

Catalog No.: Mob363 Concentrated PDM173 Prediluted







**Immunogen:** BALB/C mice were injected with thymus cells.

Isotype: IgG1, kappa
Positive Control: Tonsil

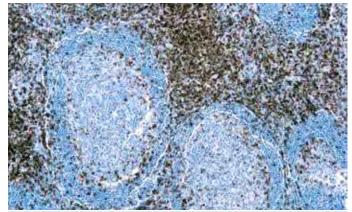
Cellular Localization: Cell membrane, cytoplasm

**Specificity:** This antibody reacts with a 49 kDa protein. At least five CD1 genes are identified (CD1a, b, c, d, and e). This antibody reacts with cortical thymocytes, Langerhans cells in epidermis, dendritic cells of dermis, and Langerhans cells of mucosa of tonsil. This antibody may be useful in the characterization of leukemias and lymphomas.

CD3

Clone: SP7
Catalog No.: RMAB005 Conc

Catalog No.: RMAB005 Concentrated RMPD005 Prediluted



Formalin fixed paraffin embedded human tonsil stained with CD3 antibody (RMPD005).

**Immunogen:** A synthetic 13-mer peptide corresponding to aa 156-168 of the  $\epsilon$  chain of human CD3 protein.

**Isotype:** IgG

Positive Control: Tonsil

Cellular Localization: Cell membrane

**Specificity:** The CD3 antigen is present on early thymocytes and mature T cells and is generally regarded as a pan-T cell marker. This antibody will help detect CD3 expression in normal and neoplastic tissues. This antibody reacts with the intracytoplasmic portion of the CD3 antigen expressed by T cells. It stains human T cells in both the cortex and medulla of the thymus and in peripheral lymphoid tissues. This antibody is suitable for staining normal and neoplastic T cells in formalin-fixed, paraffin-embedded tissues.



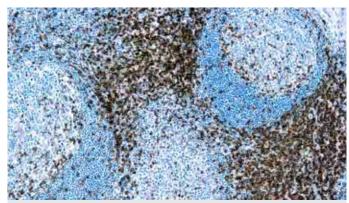
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Catalog No.: Mob474 Concentrated PDM186 Prediluted



Formalin fixed paraffin embedded human tonsil stained with CD3 (Mob474).

Immunogen: Prokaryotic recombinant protein corresponding to C-terminal region of CD3

Isotype: IgG1

Positive Control: Tonsil

Cellular localization: Cell membrane

Specificity: The Clone LN10 is specific for the non-glycosylated epsilon chain of the human CD3 molecule. Clone LN10 recognizes T cells in thymus, bone marrow, peripheral lymphoid tissue and blood and is a pan T cell marker. The CD3 molecule consists of five different polypeptide chains with molecular weights ranging from 16 to 28 kD. The CD3 antigen is first detected in early thymocytes and its appearance probably represents one of the earliest signs of commitment to the T cell lineage.

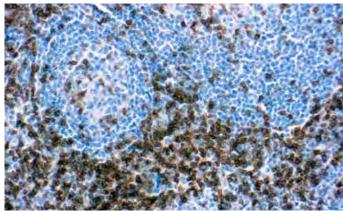
#### CD3

Clone: F7.2.38

Catalog No.: Mob422 Concentrated







Formalin fixed paraffin embedded human tonsil stained with CD3 antibody (Mob422).

Immunogen: Purified CD3εγδ/CD3ω

Isotype: IgG1

Positive Control: Tonsil

**Cellular Localization:** Membrane and cytoplasmic

PREDILUTED VOLUME KEY: PDM/PDR/RMPDXXX = 6ml | PDM/PDR/RMPDXXX-25 = 25ml

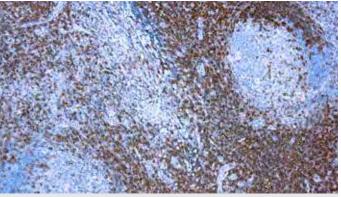
**Specificity:** CD3 is first detectable in early thymocytes and its appearance probably represents one of the earliest signs of commitment to T cell lineage. In cortical thymocytes, the antigen is predominantly present as an intracytoplasmic constituent. This antibody labels CD3 $\epsilon$  and is a useful tool for the identification of T cells and related neoplasms.

CD3, T Cell

1000

IVD

Catalog No.: RP005 Concentrated PDR002 Prediluted



Formalin fixed paraffin embedded human Tonsil stained with CD3 antibody (PDR002).

**Immunogen:** Synthetic human CD3 polypeptide conjugated to bovine serum

albumin.

**Positive Control:** Tonsil

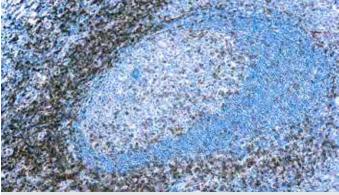
**Cellular Localization:** Cell membrane

**Specificity:** This antibody reacts with intracytoplasmic portion of the CD3 antigen on the T cells. It stains T cells in cortex as well as medulla of the thymus and lymphoid tissues. This antibody also labels T cell neoplasm, malignant histiocytes and Reed-Sternberg cells in Hodgkin lymphoma.

CD4

Clone: EP204

Catalog No.: RMAB083 Concentrated RMPD083 Prediluted



Formalin fixed paraffin embedded human tonsil stained with CD4 (RMAB083).

**Immunogen:** Synthetic peptide corresponding to residues of human CD4 protein.

Isotype: IgG

Positive Control: Tonsil

Cellular Localization: Cell membrane

Specificity: CD4 is glycoprotein found on the surface of immune cells such as T helper cells, monocytes, macrophages, and dendritic cells. It is coreceptor that assists the T-cell receptor (TCR) with antigen-presenting cell and also interacts directly with MHC class II molecules of the surface of antigen-presenting cells. Most mature T-cell lymphomas are CD4 positive with the exception of aggressive NK-cell leukemia and extranodal NK/T-cell lymphoma. CD4 plays important role in the classification of lymphocytes in inflammatory and malignant lymphomas.

CD5

Clone: 4C7

Catalog No.: Mob138 Concentrated PDM095 Prediluted



Formalin fixed paraffin embedded human tonsil stained with CD5 antibody (Mob138).

Immunogen: Recombinant prokaryotic fusion protein corresponding to the external domain of the CD5 molecule.

Isotype: IgG1, kappa
Positive Control: Tonsil

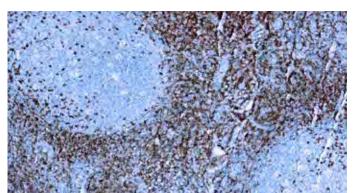
**Cellular Localization:** Cell membrane

**Specificity:** This antibody is specific to CD5 antigen. It stains a cell surface glycoprotein of 67 kDa present on 95% of thymocytes and 72% of peripheral blood lymphocytes. CD5 is expressed by many T cell leukemias, lymphomas, and activated T cells. This antibody can be used for the detection of T cell acute lymphocytic leukemias.

IVD

CD5 Clone: SP19

Catalog No.: RMAB011 Concentrated RMPD011 Prediluted



Formalin fixed paraffin embedded human tonsil stained with CD5 antibody (RMAB011).

**Immunogen:** Synthetic peptide from the intracellular region of CD5.

**Isotype:** IgG

Positive Control: Tonsil

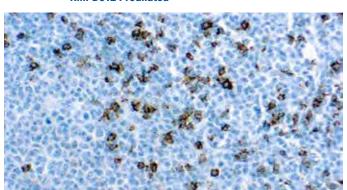
**Cellular Localization:** Cell membrane

**Specificity:** CD5 is expressed by many T cell leukemias, lymphomas, and activated T cells. Occasionally, CD5 antigen is also expressed on a subset of B cells. Mantle cell lymphomas (same as diffuse centrocytic lymphomas) are CD5(+) while the follicle center cell lymphoma are CD5(-).



CD8 Clone: SP16

Catalog No.: RMAB012 Concentrated RMPD012 Prediluted



Formalin fixed paraffin embedded human tonsil stained with CD8 antibody (RMPD012).

**Immunogen:** Synthetic peptide sequence comprising the 13 C-terminal amino acids of the cytoplasmic domain of the CD8  $\alpha$  chain.

Isotype: IgG

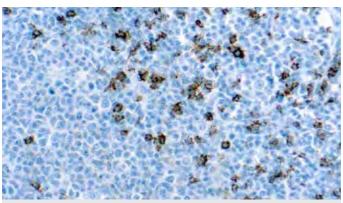
Positive Control: Tonsil

Cellular Localization: Cell membrane

**Specificity:** This antibody recognizes the CD8. The CD8 molecule consists of two chains,  $\alpha$  and  $\beta$ , which are expressed as a disulphide-linked  $\alpha/\beta$  heterodimer or as an  $\alpha/\alpha$  homodimer on T cell subset, thymocytes, and NK cells. The majority of CD8+ T cells express CD8 as  $\alpha/\beta$  heterodimer. CD8 functions as a coreceptor in concert with TCR for binding the MHC class I/ peptide complex. The HIV-2 envelope glycoprotein binds CD8  $\alpha$  chain (but not  $\beta$  chain).



Catalog No.: Mob117 Concentrated PDM094 Prediluted



Formalin fixed paraffin embedded human tonsil stained with CD8 antibody (PDM094).

**Immunogen:** Synthetic peptide comprised of 13 C terminal amino acids from the cytoplasmic domain of the CD8 molecule.

Isotype: IgG1, kappa
Positive Control: Tonsil

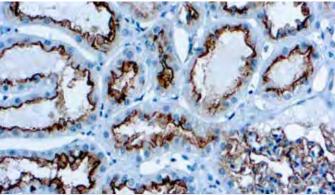
Cellular Localization: Cell membrane

**Specificity:** This antibody reacts specifically with a 32 kDa protein similar to the CD8 molecule. This antibody stains cytotoxic/suppressor T cells and shows staining patterns similar to clustered CD8 monoclonal antibodies.

#### CD10

Clone: EP195

Catalog No.: RMAB037 Concentrated RMPD037 Prediluted



Formalin fixed paraffin embedded renal cell carcinoma stained with CD10 antibody (RMABO37).

**Immunogen:** A recombinant fragment corresponding to residues in human CD10 protein.

Isotype: Rabbit IgG

Positive Control: Tonsil, Renal Cell Carcinoma, Follicular Lymphoma

Cellular Localization: Cytoplasmic Cell Membrane

Specificity: The common acute lymphoblastic leukemia antigen (CALLA/ CD10) is a single-pass type II transmembrane metallo-endopeptidase that cleaves and inactivates a variety of peptide growth factors important for signal transduction including the enkephalins, bombesin and substance P. CD10 is expressed by a number of hematopoietic cells such as immature T and B cells, B cells of the germinal centers of lymphoid follicles and granulocytes. It also reacts with a variety of non-hematopoietic cells, including epithelial cells in GI tract and kidney tubular. In liver, the bile canaliculi shows a moderate to strong staining. CD10 has been used for the identification and classification of certain types of malignant lymphoma and leukemia. CD10 is expressed in a high percentage of cases of acute lymphoblastic leukemia, follicular lymphoma, Burkitt lymphoma, some hematopoietic tumors, and chronic myelogenous leukemias in lymphoid blast crisis. It is also known to be a marker of endometrial stromal cells. It is helpful in differentiating endometrial stromal sarcoma (ESS) from uterine cellular leiomyoma (UCL) and uterine leiomyosarcoma (ULS).

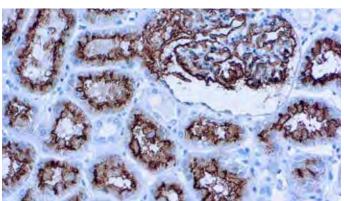
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**CD10 Clone: 56C6** 

Catalog No.: Mob240 Concentrated PDM107 Prediluted



Formalin fixed paraffin embedded human renal cell carcinoma stained with CD10 (PDM107).

Immunogen: Prokaryotic recombinant protein corresponding to the external domain of the CD10 glycoprotein.

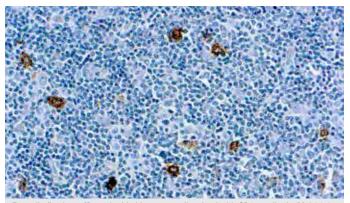
Isotype: IqG1

Positive Control: Tonsil, Renal Cell Carcinoma **Cellular Localization:** Cell membrane

Specificity: This antibody is specific to human CD10 antigen of 100 kDa, also known as common acute lymphocytic leukemia antigen (CALLA). CD10 antigen has been identified on the surface of early lymphoid progenitor cells, immature B cells within adult bone marrow, and germinal center B cells within lymphoid tissue.

**CD15** 

Clone: MMA; same as LeuM1 Catalog No.: Mob365 Concentrated PDM127 Prediluted



Formalin fixed paraffin embedded human tonsil stained with CD15 antibody (Mob365).

Immunogen: BALB/C mice were injected with U937 histiocytic cell line.

Isotype: IgM, kappa **Positive Control:** Tonsil

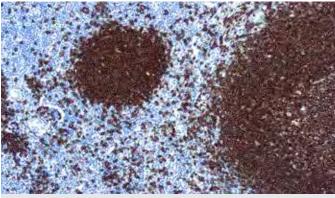
Cellular Localization: Cell membrane

**Specificity:** This antibody reacts with a 220 kDa protein. CD15 plays a role in mediating phagocytosis, bactericidal activity and chemotaxis. It is present on >95% of granulocytes including neutrophils and eosinophils and to a lesser degree on monocytes. CD15 is also expressed in Reed-Sternberg cells and some epithelial cells. CD15 is very useful in the identification of Hodgkin disease.

**CD20** 

Clone: L26

Catalog No.: Mob004 Concentrated PDM004 Prediluted



Formalin fixed paraffin embedded human tonsil stained with CD20 antibody (Mob004).

**Immunogen:** BALB/C mice were injected with human tonsil B cells.

Isotype: IgG2a, kappa **Positive Control:** Tonsil

**Cellular Localization:** Cell membrane and cytoplasm

**Specificity:** This antibody is specific to a 33 kDa polypeptide present on the majority of B cells in peripheral blood and lymphoid tissue. No reactivity with

other hematopoietic cells has been observed.

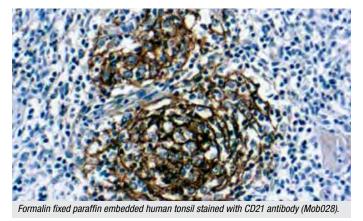
CD21, B Cell

Clone: 1F8

Catalog No.: Mob028 Concentrated PDM122 Prediluted







Immunogen: Purified receptor for the C3d fragment of the third complement component CR2, from human tonsil.

Isotype: IgG1, kappa **Positive Control: Tonsil** 

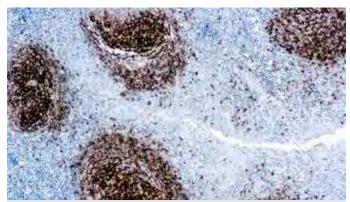
**Cellular Localization:** Cell membrane

**Specificity:** This antibody reacts with CD21 antigen of MW 145 kDa, present on the surface of mature B cells. The antigen is present at high density on follicular dendritic cells. CD21 is involved in transmitting growth-promoting signals to the interior of the B cell.

CD23 Clone: 1B12

Catalog No.: Mob294 Concentrated

**PDM143 Prediluted** 



Formalin fixed paraffin embedded human tonsil stained with CD23 antibody (Mob294).

**Immunogen:** Prokaryotic recombinant fusion protein corresponding to the external domain of the CD23 molecule.

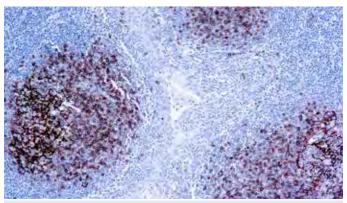
Isotype: IgG1, kappa Positive Control: Tonsil

Cellular Localization: Cell membrane

Specificity: This antibody is specific to a membrane glycoprotein of 45 kDa, designated as CD23. CD23 is found on a subpopulation of peripheral blood cells, B lymphocytes, and on EBV transformed B lymphoblastoid cell lines. Expression of CD23 has been detected in neoplastic cells from cases of B cell chronic lymphocytic leukemias.

**CD23** Clone: SP23

Catalog No.: RMAB013 Concentrated RMPD013 Prediluted



Formalin fixed paraffin embedded human tonsil stained with CD23 antibody (RMAB013).

Immunogen: Recombinant protein encoding human CD23 48-248 aa.

Isotype: IqG

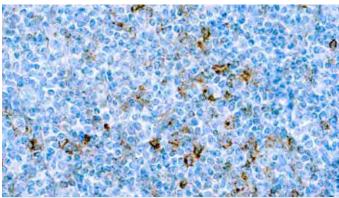
Positive Control: Tonsil

Cellular Localization: Cell membrane

Specificity: This antibody recognizes CD23. CD23 is a 45kDa glycoprotein which is present on a subpopulation of freshly isolated peripheral blood and tonsil B cells and strongly expressed on EBV-transformed B lymphoblasts. The CD23 molecule is identical to the low affinity IgE receptor found on B cells. Expression of CD23 has been detected in neoplastic cells from cases of B cell chronic lymphocyctic leukemia and some cases of centroblastic/ centrocytic lymphoma.



Catalog No.: Mob254 Concentrated PDM144 Prediluted



Formalin fixed paraffin embedded human tonsil stained with CD25 antibody (Mob254).

Immunogen: BALB/C mice were injected with recombinant human

interleukin-2 receptor. Isotype: IgG1, kappa Positive Control: Tonsil

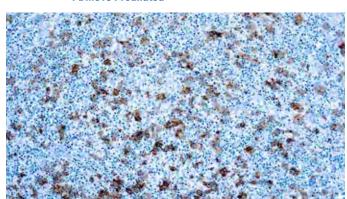
**Cellular Localization:** Cell membrane

Specificity: This antibody is specific to a 55 kDa protein known as interleukin 2-receptor  $\alpha$  (IL-2R  $\alpha$ ). IL-2R  $\alpha$  is over expressed on the surface of activated T cells, HTLV-1 or HTLV-2 positive T cell lines, and moderately expressed on activated B cells, NK-cells, and macrophages.

#### CD30/Ki-1 Antigen

Clone: Ber-H2

Catalog No.: Mob032 Concentrated PDM018 Prediluted



Formalin fixed paraffin embedded human Hodgkin's Lymphoma stained with CD30 antibody (Mob032).

Immunogen: BALB/C mice were immunized with L428 cell line.

Isotype: IgG1, kappa

Positive Control: Tonsil, Hodgkin's Lymphoma Cellular Localization: Cell membrane

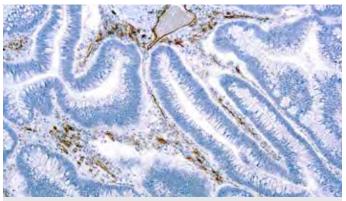
**Specificity:** This antibody reacts with a 105 kDa glycoprotein expressed by Hodgkin and Reed-Sternberg cells and by tumor cells of a majority of large cell lymphomas. In normal lymphoid tissues, it reacts with a small population of large cells present around B cell follicles and sometimes at the rim of

germinal centers.

#### CD31, Endothelial Cell

Clone: JC/70A

Catalog No.: Mob034 Concentrated PDM020 Prediluted



Formalin fixed paraffin embedded human Colon Ca stained with CD31 antibody (Mob034).

**Immunogen:** BALB/C mice were immunized with membrane preparation of a spleen from a patient with hairy cell leukemia.

Isotype: IgG1, kappa

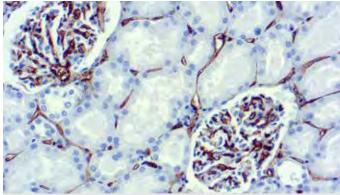
Positive Control: Tonsil, Colon Ca Cellular Localization: Cell membrane

**Specificity:** This antibody reacts with a 100 kDa glycoprotein expressed by endothelial cells and a 130 kDa glycoprotein present in platelets. It stains endothelial cells in normal as well as malignant tissues.

#### CD34, Endothelial Cell

Clone: QBEND/10

Catalog No.: Mob098 Concentrated PDM050 Prediluted



Formalin fixed paraffin embedded human kidney stained with CD34 antibody (Mob098).

Immunogen: Endothelial cells (HUVE).

Isotype: IgG1, kappa

Positive Control: Tonsil, kidney Cellular Localization: Cell membrane

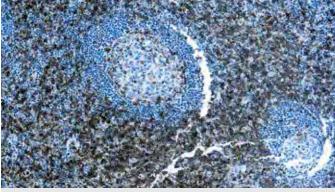
**Specificity:** This antibody reacts with a glycoprotein of MW 110 kDa, present on the surface of hematopoietic cells i.e. myeloid and lymphoid progenitors.

It stains the vascular endothelial cells.



Clone: DF-T1
Catalog No.: Mob039 Concentrated

Catalog No.: Mob039 Concentrated PDM060 Prediluted



Formalin fixed paraffin embedded human tonsil stained with CD43 antibody (Mob039).

Immunogen: BALB/C mice were immunized with myeloblast cell line KG1.

Isotype: IgG1, kappa
Positive Control: Tonsil

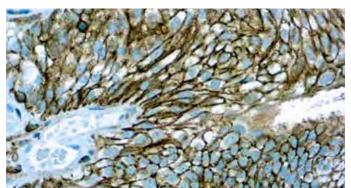
**Cellular Localization:** Cell Membrane

**Specificity:** This antibody reacts with an antigen expressed by normal and neoplastic T cells and myeloid lineage cells. It strongly stains T cells in the interfollicular areas of normal lymphoid tissues.

#### CD44/HCAM

Clone: 156-3C11

Catalog No.: Mob256 Concentrated PDM172 Prediluted



Formalin fixed paraffin embedded human bladder carcinoma stained with CD44, HCAM antibody (Mob256).

Immunogen: BALB/C mice were injected with stimulated human leukocytes.

Isotype: IgG2a

**Positive Control:** Tonsil, bladder carcinoma **Cellular Localization:** Cell membrane

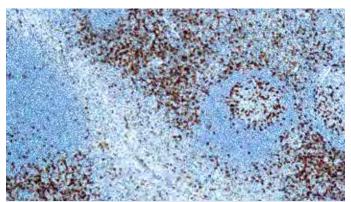
**Specificity:** This antibody is specific to a cell surface glycoprotein of 80-95 kDa, known as CD44. CD44 is expressed on the surface of lymphocytes, monocytes, and granulocytes. This antibody reacts with red cells pretreated with 2-aminoethlyl isothiouronium bromide (AET).



#### CD45RO, T Cell

Clone: UCHL1

Catalog No.: Mob043 Concentrated PDM015 Prediluted



Formalin fixed paraffin embedded human tonsil stained with CD45RO antibody (PDM015).

Immunogen: BALB/C mice were immunized with IL-2 dependent T cell line, CA1.

Isotype: IgG2a, kappa Positive Control: Tonsil

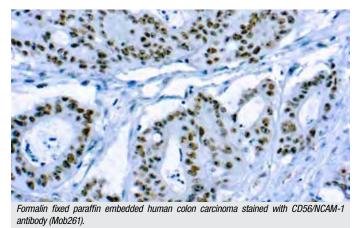
Cellular Localization: Cell membrane

Specificity: This antibody reacts with a 180 kDa glycoprotein of the CD45 family, found on most thymocytes and activated T cells but only on a portion of the resting T cells. It reacts with most thymocytes, a subpopulation of resting cells within both the CD4 and CD8 subsets and mature activated T cells.

# CD56/Neural Cell Adhesion Molecule-1

(NCAM-1) Clone: 123C3.D5

Catalog No.: Mob261 Concentrated PDM110 Prediluted



Immunogen: BALB/C mice were injected with membrane preparation of a small cell lung carcinoma.

Isotype: IgG1, kappa

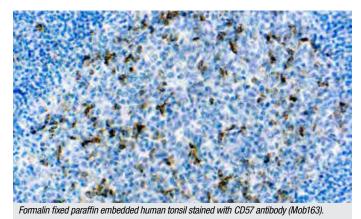
Positive Control: Neuroblastoma Cellular Localization: Cell membrane

Specificity: This antibody is specific to two proteins of 185 kDa and 145 kDa, identified as two isoforms of neural cell adhesion molecules (NCAM/CD56). NCAM is expressed on most neuroectodermal derived cell lines, tissues, and neoplasms such as retinoblastoma, medulloblastoma, astrocytoma, and neuroblastoma.



Clone: NK-1

Catalog No.: Mob163 Concentrated PDM130 Prediluted



**Immunogen:** Human peripheral blood mononuclear cells.

Isotype: IgM

Positive Control: Tonsil

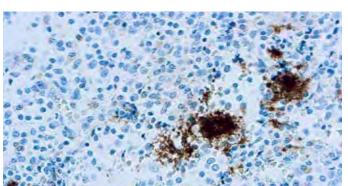
**Cellular Localization:** Cell membrane

**Specificity:** This antibody is specific to a 110kDa human CD57 myeloid associated glycoprotein. It stains mononuclear cells with natural killer activity, neuroendocrine cells, and their tumors.

#### CD61/Platelet Glycoprotein Illa

**Clone: Y2/51** 

Catalog No.: Mob164 Concentrated PDM064 Prediluted



Formalin fixed paraffin embedded human tonsil stained with CD61 antibody (Mob164).

Immunogen: BALB/C mice were immunized with PHA-stimulated human mononuclear cells.

Isotype: IgG1, kappa Positive Control: Tonsil

Cellular Localization: Cell membrane

Specificity: This antibody recognizes a glycoprotein of 110 kDa molecular weight present on human platelets and also reacts with megakaryocytes and megakaryoblasts. The antigen is also present on endothelium and osteoclasts. The glycoprotein Illa molecule produced by endothelium cells is identical in sequence to platelet glycoprotein Illa.

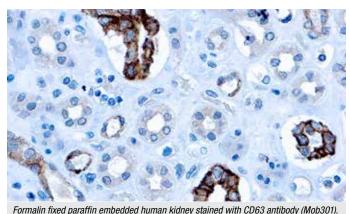




#### **CD63**

Clone: NKI/C3 (same as MX-49.129.5)

Catalog No.: Mob301 Concentrated PDM212 Prediluted



**Immunogen:** Smooth plasma membrane fraction of MeWo cells.

Isotype: IgG1, kappa Positive Control: Melanoma **Cellular Localization:** Cytoplasmic

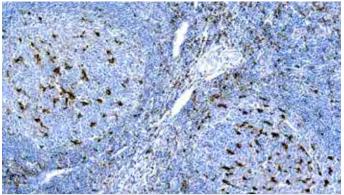
Specificity: This antibody is specific to 53 kDa protein, expressed on activated platelets. CD63 is a lysosomal membrane glycoprotein that is translocated to plasma membrane after platelet activation. It is also expressed on granulocytes, B cells, and T cells.

#### CD68, Macrophage

Clone: KP1

Catalog No.: Mob167 Concentrated

PDM066 Prediluted



Formalin fixed paraffin embedded human tonsil stained with CD68 Macrophage (PDM066).

Immunogen: Subcellular fraction of human alveolar macrophages.

Isotype: IgG1, kappa **Positive Control:** Tonsil

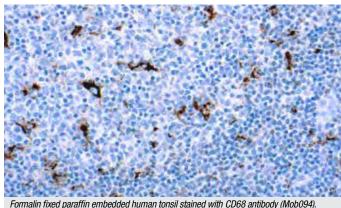
**Cellular Localization:** Cell membrane

Specificity: This antibody is specific to macrophages in a wide variety of human tissues. It reacts with myeloid precursors and peripheral blood granulocytes. It also stains a cell population known as plasmacytoid T cells.

#### CD68/Macrophage

Clone: PG-M1

Catalog No.: Mob094 Concentrated PDM065 Prediluted



**Immunogen:** BALB/C mice were immunized with Gaucher's cells.

Isotype: IgG3, kappa **Positive Control:** Tonsil

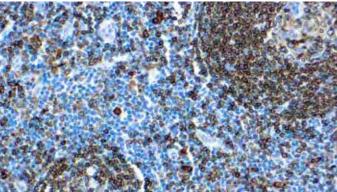
**Cellular Localization:** Cell membrane

Specificity: This antibody reacts with a glycoprotein of 110 kDa, expressed as an intracytoplasmic molecule. It stains macrophages in a wide variety of tissues. Myeloid precursor cells and peripheral granulocytes are negative. The PG-M1 differs from EMB11 (CD68) because of its non-reactivity with granulocytes and their precursor cells.

#### CD74, Lymphoid Marker

Clone: LN2

Catalog No.: Mob168 Concentrated PDM033 Prediluted



Formalin fixed paraffin embedded human tonsil stained with CD74 antibody (Mob168).

Immunogen: SU-DHL-4 lymphoma cells.

Isotype: IgG1, kappa **Positive Control: Tonsil** 

Cellular Localization: Cell membrane

Specificity: This antibody is specific to CD74. This antibody can be used for the identification of B cell lymphomas and leukemias. It also stains activated neoplastic cells in T cell lymphomas and Reed-Sternberg cells.



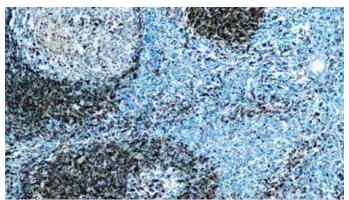




CD79a, Antigen Clone: HM47/A9

Catalog No.: Mob242 Concentrated

PDM125 Prediluted



Formalin fixed paraffin embedded human tonsil stained with CD79a Antigen (PDM125)

**Immunogen:** Synthetic polypeptide consisting of the amino acid sequence GTYQDVGSLNIADVQ.

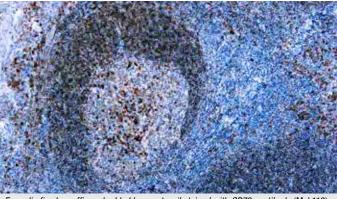
Isotype: IgG1, kappa Positive Control: Tonsil

Cellular Localization: Cell membrane

Specificity: This antibody is specific to human CD79a antigen complex, consisting of two polypeptides non-covalently associated with membranebound immunoglobulins on B cells. This complex of polypeptide and immunoglobulins constitute the B cell antigen receptor. The two components of this complex are designated CD79a and CD79b. The CD79a antigen appears at the pre-B cell stage, early in maturation and persists until the plasma cell stage. The CD79a antigen is found in majority of acute leukemias of precursor B cell type, in B cell lines, and B cell lymphomas.

CD79a, B Cell Clone: HM57

Catalog No.: Mob118 Concentrated PDM271 Prediluted



Formalin fixed paraffin embedded human tonsil stained with CD79a antibody (Mob118).

Immunogen: Synthetic peptide comprising of 202-216 C terminal amino acids part of mb-1 protein.

Isotype: IgG1, kappa Positive Control: Tonsil

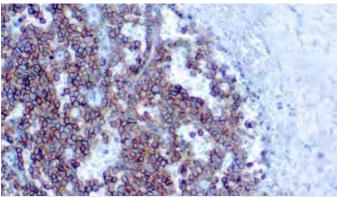
Cellular Localization: Cell membrane

**Specificity:** This antibody reacts specifically with B cells at the pre B cell stage. It stains a majority of acute leukemias of precursor B cell type, B cell lymphomas, and some myelomas. The mb-1 polypeptide along with B29 polypeptide forms an antigen receptor complex on the B cell, performing signal transduction and phosphorylation functions.

#### CD99/MIC2, Ewing's Sarcoma Marker

Clone: H036-1.1

Catalog No.: Mob262 Concentrated **PDM106 Prediluted** 



Formalin fixed paraffin embedded human Ewing's sarcoma stained with CD99/MIC2 antibody (PDM106).

Immunogen: BALB/C mice were injected with purified E-rosette forming cells from human peripheral blood lymphocytes.

Isotype: IgM

Positive Control: Ewing's sarcoma **Cellular Localization:** Cell membrane

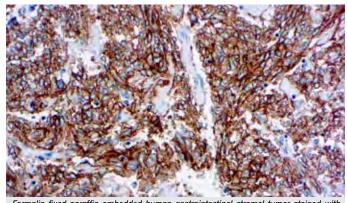
Specificity: This antibody is specific to a sialoglycoprotein of 27-32 kDa known as CD99 or MIC2 gene product. CD99 is expressed on the cell membrane of some lymphocytes, cortical thymocytes and granulosa cells of the ovary, Sertoli cells of the testis, pancreatic islet cells and some endothelial cells. Mature granulocytes express very little or no CD99.

#### CD117/c-Kit

Catalog No.: RP063 Concentrated **PDR045 Prediluted** 







Formalin fixed paraffin embedded human gastrointestinal stromal tumor stained with CD117/c-Kit antibody (RP063).

Immunogen: A synthetic peptide from C-terminus of human CD117/c-Kit protein.

Positive Control: Gastrointestinal stromal tumor Cellular Localization: Cell membrane, cytoplasm

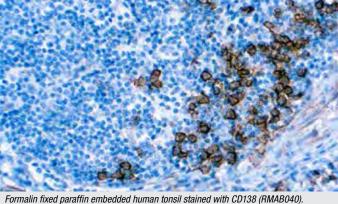
**Specificity:** This antibody reacts with a 145 kDa protein. CD117/c-Kit is a transmembrane receptor tyrosine kinase and is expressed in many tissues and cells. CD117/c-Kit is involved in the development of several lineages of stem cells, such as germ cells, neural crest derived melanocytes and hematopoietic precursor cells. This antibody can be used in the identification of gastrointestinal stromal tumors.

IVD only for markets outside the U.S. RUO for U.S. market.

CD138 Clone: EP201

Catalog No.: RMAB040 Concentrated





Immunogen: A synthetic peptide corresponding to residues in human

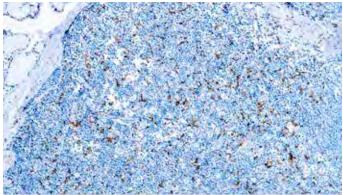
CD138 protein. Isotype: Rabbit IqG

Positive Control: Tonsil, plasmacytoma **Cellular Localization:** Membrane

Specificity: In the hematopoietic system, CD138 labels plasma cells. It is an excellent marker for plasmacytic differentiation within the spectrum of hematologic malignancy. Among non-hematolymphoid cells, CD138 reactivity is observed in many types of epithelial cells and stoma cells in both normal and tumor tissues.

CD163 Clone: 10D6

Catalog No.: Mob460 Concentrated **PDM579 Prediluted** 



Formalin fixed paraffin embedded human tonsil stained with CD163 antibody (Mob460).

Immunogen: Human CD163 antigen.

Isotype: IqG1

**Positive Control:** Tonsil

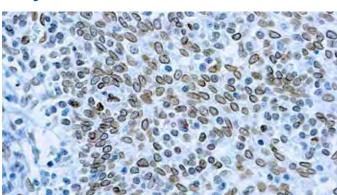
**Cellular Localization:** Membrane

**Specificity:** The CD163 molecule is a type I membrane protein also known as M130 antigen, Ber-Mac3, Ki-M8 or SM4. CD163 protein is restricted in its expression to the monocytic/macrophage lineage. It is reported to be present on all circulating monocytes and most tissue macrophages except those found in the mantle zone and germinal centers of lymphoid follicles, interdigitating reticulum cells and Langerhans cells. In addition, multinucleated cells within inflammatory lesions are reported not to express CD163 protein. The protein is upregulated by glucocorticoids and downregulated by the immunosuppressant cyclosporin A and by phorbol esters.

#### Cdc25A

Clone: DCS-120

Catalog No.: Mob337 Concentrated



Formalin fixed paraffin embedded human tonsil stained with Cdc25A antibody (Mob337).

Immunogen: BALB/C mice were injected with purified recombinant Cdc25A.

Isotype: IgG2a Positive Control: Tonsil

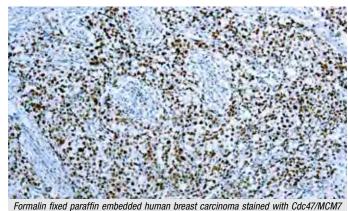
Cellular Localization: Nuclear membrane

Specificity: This antibody reacts with a 65 kDa protein known as Cdc25A. The activity of cyclin-dependent kinases in cell cycle is regulated by the phosphorylation status, which is controlled by the antagonistic action of wee 1 kinase and Cdc25 phosphatases. Three Cdc25 genes are present in human cells: Cdc25A, Cdc25B and Cdc25C. Cdc25A and Cdc25B are expressed throughout the cell cycle, with peak expression in G1 for Cdc25A and in both G1-S phase and G2 for Cdc25B. Cdc25C is mainly expressed in G2 phase.

#### Cdc47/MCM7

Clone: 47DC141

Catalog No.: Mob340 Concentrated PDM340 Prediluted



antibody (Mob340).

Immunogen: BALB/C mice were injected with recombinant human cdc47 protein.

Isotype: IaG1

Positive Control: Breast carcinoma Cellular Localization: Nuclear

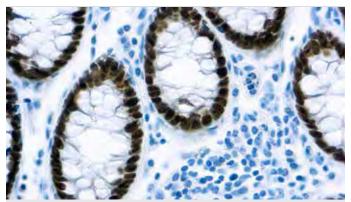
**Specificity:** This antibody reacts with an 80 kDa protein known as hCdc47. hCdc47 is a member of the MCM family, which allows DNA to replicate once per cell cycle. Expression of Cdc47 protein has been found in the nuclei of proliferative components of normal lymph nodes, bone marrow, epidermis and mucosa. Malignant tumors from several organs contain more nuclear hCdc47-positive cells than their normal counterparts.



#### CDX2 Clone: EP25

Catalog No.: RMAB059 Concentrated





Formalin fixed paraffin embedded colon carcinoma stained with CDX2 antibody (RMAB059).

**Immunogen:** A synthetic peptide corresponding to residues near the C-term of human Cdx2 protein.

Isotype: Rabbit IqG

Positive Control: Colon, colon adenocarcinoma

Cellular Localization: Nuclear

Specificity: The caudal-related homeodomain protein 2, Cdx2, is a transcription factor which is expressed in the intestine and is thought to play an important role in the proliferation and differentiation of intestinal epithelial cells. The Cdx2 protein is expressed in primary and metastatic colorectal carcinomas, intestinal metaplasia of the stomach and intestinal type gastric cancer. In human colorectal cancer, the expression of both Cdx2 and carbonic anhydrase 1, a gene regulated by Cdx2, is reduced or absent. Cdx2 is one of the important regulators in defining pathways for coordinate control of drug metabolism in the gastrointestinal tract.



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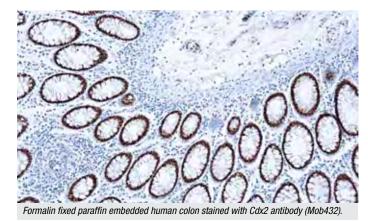
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#### CDX2

Clone: AMT28

Catalog No.: Mob432 Concentrated PDM187 Prediluted



Immunogen: Prokarvotic recombinant protein corresponding to the 180 amino acid N-terminal region of the human cdx2 molecule.

Isotype: IgG1, kappa

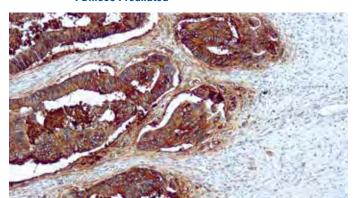
Positive Control: Colon cancer Cellular Localization: Nuclear

Specificity: Cdx2 is a caudal type homeobox gene that encodes an intestinespecific transcription factor expressed early in intestinal development and may be involved in the regulation of proliferation and differentiation of intestinal epithelial cells. It is expressed in the nuclei of epithelial cells throughout the intestine, from duodenum to rectum. The cdx2 protein is expressed in primary and metastatic colorectal carcinomas and has also been demonstrated in intestinal metaplasia of the stomach and intestinaltype gastric cancer, while it is not expressed in the normal gastric mucosa. Studies have shown that cdx2 is a superior marker compared to CK20.

#### **CEA (Carcinoembryonic Antigen)**

Clone: COL-1

Catalog No.: Mob008 Concentrated PDM005 Prediluted



Formalin fixed paraffin embedded human colon Ca stained with CEA antibody (Mob008).

**Immunogen:** BALB/C mice were injected with extract of colon carcinoma cells.

Isotype: IgG2a, kappa

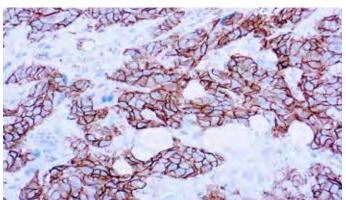
Positive Control: Colon Carcinoma

**Cellular Localization:** Cytoplasmic and lumenal membrane

Specificity: This antibody is a member of a family of complex antigens which also includes non-specific cross-reacting antigens (NCA). This antibody stains specific regions of CEA. It reacts with colorectal adenocarcinomas but does not show any staining with polymorphonuclear neutrophils and erythrocytes.

#### c-erbB-2/Oncoprotein

Catalog No.: RP006 Concentrated PDR003 Prediluted



Formalin fixed paraffin embedded human breast carcinoma stained with c-erbB-2 antibody (RP006).

**Immunogen:** Keyhole limpet hemocyanin conjugated synthetic human peptide from c-erbB-2 oncoprotein.

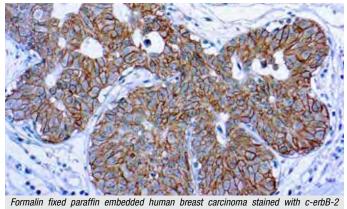
Positive Control: Breast carcinoma
Cellular Localization: Cell membrane

**Specificity:** This antibody reacts with the c-erbB-2 oncoprotein, a 190 kDa protein. The proto-oncogene for c-erbB-2 is located on the human chromosome 17, band 21. It has structural similarities to EGFR. Several studies have indicated that c-erbB-2 may be a good indicator of the prognosis of human carcinomas in the breast, ovary, uterus and gastrointestinal tract. IVD only for markets outside the U.S. RUO for U.S. market.

#### c-erbB-2/Oncoprotein

Clone: SP3

Catalog No.: RMAB008 Concentrated RMPD008 Prediluted



antibody (RMAB008).

**Immunogen:** Recombinant protein encoding extracellular domain of human c-erbB2.

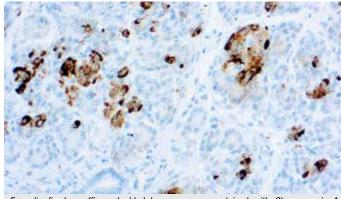
Isotype: IqG

Positive Control: Breast carcinoma Cellular Localization: Cell membrane

**Specificity:** This antibody recognizes a c-erbB-2 protein, which is a receptor tyrosine kinase of the c-erbB family. It is closely related in structure to the epidermal growth factor receptor. c-erbB-2 oncoprotein is detectable in a subset of breast and other adenocarcinomas, as well as transitional cell carcinomas. In the case of breast cancer, expression determined by immunohistochemistry has been shown to be associated with poor prognosis. *IVD only for markets outside the U.S. RUO for U.S. market*.

#### Chromogranin A

Catalog No.: RP008 Concentrated PDR061 Prediluted



Formalin fixed paraffin embedded human pancreas stained with Chromogranin A antibody (RP008).

**Immunogen:** C-terminal half of chromogranin A was purified from urine of patients with carcinoid syndrome.

**Positive Control:** Pancreas

**Cellular Localization:** Cytoplasmic

**Specificity:** This antibody reacts with human chromogranin A in the neuroendocrine cells and neural tissues. It does not recognize the epitopes located on the N-terminal half of the chromogranin A molecule.

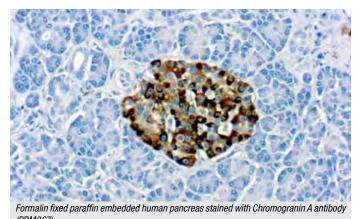
#### Chromogranin A

Clone: LK2H10

Catalog No.: Mob048 Concentrated PDM067 Prediluted







**Immunogen:** BALB/C mice were immunized with human pheochromocytoma.

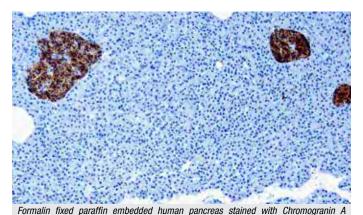
Isotype: IgG1, kappa
Positive Control: Pancreas
Cellular Localization: Cytoplasmic

**Specificity:** Chromogranin A is a 439 amino acid protein present in secretory granules of a wide variety of endocrine cells and neurons. A positive staining is seen in the secretory granules of parathyroid, adrenal medulla, anterior pituitary gland and Langerhans islets of pancreas. This antibody stains a variety of neuroendocrine tumors.

#### Chromogranin A

Clone: SP12

Catalog No.: RMAB015 Concentrated RMPD015 Prediluted



antibody (RMAB015).

Immunogen: Recombinant protein encoding human Chromogranin A.

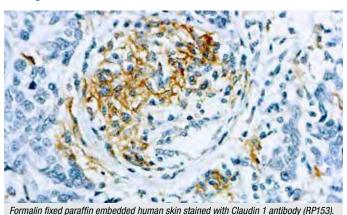
**Isotype:** IgG

Positive Control: Pancreas

**Cellular Localization:** Cytoplasmic

**Specificity:** This antibody recognizes Chromogranin A. Chromogranin A (a protein of 439 amino acid which is encoded on chromosome 14) is present in neuroendocrine cells throughout the body, including the neuroendocrine cells of the large and small intestine, adrenal medulla and pancreatic islets. It is an excellent marker for carcinoid tumors, pheochromocytomas, paragangliomas, and other neuroendocrine tumors. Coexpression of chromogranin A and neuron specific enolase (NSE) is common in neuroendocrine neoplasms.

# Claudin 1 Catalog No.: RP153 Concentrated



Immunogen: A synthetic peptide corresponding to C-terminal of human claudin 1

Positive Control: Breast carcinoma, skin

**Cellular Localization:** Cell membrane, cytoplasmic

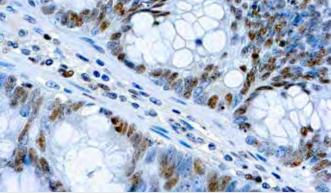
**Specificity:** Claudin 1-8 proteins are a family of transmembrane proteins associated with tight junctions. Tight junctions are specialized regions of cell to cell contact, made up of a network of strands to act as a molecular gasket for preventing the leakage of ions, water etc., between cells. They are abundant in luminal epithelial sheets where they maintain epithelial cell polarity. Different tissues exhibit different claudin composition.

IVD only for markets outside the U.S. RUO for U.S. market.



C-myc Clone: 9E10

Catalog No.: Mob231 Concentrated PDM211 Prediluted



Formalin fixed paraffin embedded human colon adenocarcinoma stained with c-myc (Mob231).

**Immunogen:** Synthetic peptide corresponding to residues 408-439 of the human p62c-myc protein.

Isotype: IgG1

Positive Control: Breast carcinoma Cellular Localization: Nuclear

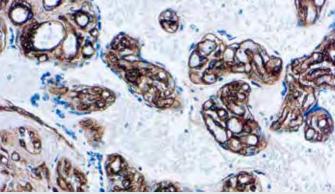
**Specificity:** This antibody recognizes an epitope located in the amino acid residue 410-419 of human oncogene product c-myc. This antibody reacts with both components of the p62 and p64 c-myc.

#### Collagen Type IV

Clone: COL-94

Catalog No.: Mob229 Concentrated PDM276 Prediluted





Formalin fixed paraffin embedded human placenta stained with Collagen Type IV antibody

Immunogen: Human collagen type IV.

Isotype: IgG1

Positive Control: Skin

Cellular Localization: Basement membrane

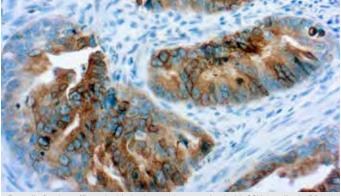
**Specificity:** This antibody recognizes collagen type IV epitope located on the  $\alpha$ 1 and/or  $\alpha$ 2 chains of human collagen type IV. This antibody shows no cross-reactivity with collagen types I, II, III, V, VI and VII and does not react with human vitronectin, fibronectin or chondroitin sulfate A, B and C.

# COX-2 (Cyclooxygenase-2)

Cyclin D1 Clone: EP12



Catalog No.: RP111 Concentrated



Formalin fixed paraffin embedded colon carcinoma stained with COX-2 antibody (RP111).

**Immunogen:** Recombinant protein corresponding to C-terminus of rat COX2.

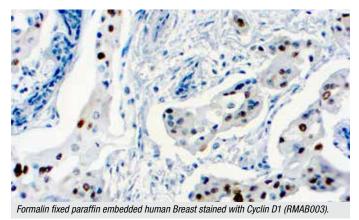
Positive Control: Lung and colon carcinoma Cellular Localization: Cytoplasmic, membrane

Specificity: This antibody reacts with a 70 kDa protein. COX-2 (Cyclooxygenase-2) is an inducible enzyme. It is involved in the response of cells to growth factors, tumor promoters and cytokines that induce its expression. COX-2 expression markedly increased in 85-90% of human colorectal adenocarcinoma whereas COX-1 levels remained unchanged.

Cyclin D1 Clone: SP4



Catalog No.: RMAB003 Concentrated **RMPD003 Prediluted** 



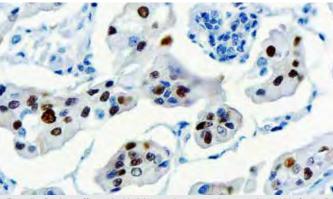
**Immunogen:** A synthetic peptide from C-terminus of human cyclin D1.

Isotype: IgG

Positive Control: Breast carcinoma **Cellular Localization: Nuclear** 

Specificity: Cyclin D1 or PRAD-1 or bcl-1 is one of the key cell cycle regulators, and functions in association with cdk4 and/or cdk6 by phosphorylating the Rb protein. It is a putative proto-oncogene overexpressed in a wide variety of human neoplasms including mantle cell lymphomas (MCL).

Catalog No.: RMAB106 Concentrated **RMPD106 Prediluted** 



Formalin fixed paraffin embedded human breast carcinoma stained with Cyclin D1 antibody (RMAB106).

Immunogen: A synthetic peptide corresponding to residues near C-terminus of human Cyclin D1 protein.

Isotype: Rabbit IgG

Positive Control: Breast carcinoma **Cellular Localization: Nuclear** 

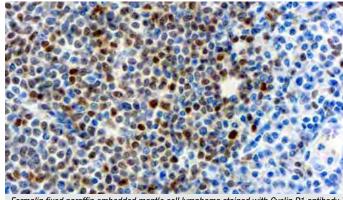
Specificity: Amplification or overexpression of Cyclin D1 plays a pivotal role in the development of various human cancers including breast cancer, colon cancer, melanoma, prostate cancer and lymphoma. It is useful to differentiate mantle cell lymphoma from small cleaved cell lymphoma.

#### Cyclin D1 **Clone: DCS-6**





Catalog No.: Mob178 Concentrated PDM046 Prediluted



Formalin fixed paraffin embedded mantle cell lymphoma stained with Cyclin D1 antibody (Mob178).

**Immunogen:** Prokaryotic recombinant fusion protein corresponding to human cyclin D1.

Isotype: IgG2a

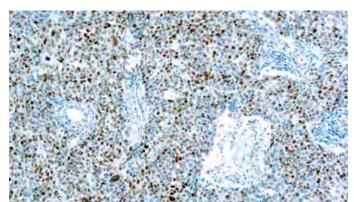
Positive Control: Breast carcinoma **Cellular Localization:** Nuclear

**Specificity:** This antibody is specific to human cyclin D1. The cyclin D1 gene is located on 11g13 and has been shown to be amplified in a variety of tumors. Maximum expression of cyclin D1 occurs at a critical point in mid to late G1 phase of the cell cycle.

#### Cyclin E Protein

Clone: HE12

Catalog No.: Mob266 Concentrated PDM145 Prediluted



Formalin fixed paraffin embedded human breast carcinoma stained with Cyclin E antibody (Mob266).

Immunogen: Synthetic peptide corresponding to human cyclin E protein.

Isotype: IgG1

Positive Control: Breast carcinoma Cellular Localization: Nuclear

**Specificity:** This antibody recognizes a doublet of 50 kDa and a single band of 42 kDa identified as cyclin E. Cyclin proteins are a family of related proteins, which control the progression of the eukaryotic cell cycle. Overexpression of cyclin E shortens the length of the G1 phase, accelerating progression of S phase. The activity of cyclin E is mediated through its activation of cyclin dependent kinase 2 (cdk2) protein and is modulated by the presence of tumor suppressor proteins such as p16.

#### Cytokeratin

Clone: MNF116

Catalog No.: Mob052 Concentrated PDM116 Prediluted



**Immunogen:** BALB/C mice were immunized with crude extract of splenic cells from a nude mouse engrafted with MCF-7 cells.

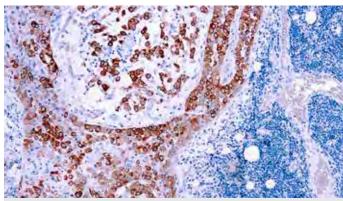
Isotype: IgG1, kappa
Positive Control: Skin

Cellular Localization: Cytoplasmic

**Specificity:** This antibody recognizes cytokeratin polypeptides ranging from 40 through 58kDa, corresponding to cytokeratins 5, 6, 8, 17 and 19. It shows a broad pattern of reactivity with human epithelial tissues from simple glandular epithelia to stratified squamous epithelia, like epidermis, mammary gland ducts and tracheal epithelium.

# Cytokeratin 5 Clone: XM26

Catalog No.: Mob361 Concentrated PDM139 Prediluted



Formalin fixed paraffin embedded human colon stained with Cytokeratin 5 (PDM139).

**Immunogen:** BALB/C mice were injected with prokaryotic recombinant protein corresponding to 103 amino acid portion of C-terminal region of the human cytokeratin 5 molecule.

Isotype: IgG1, kappa
Positive Control: Skin

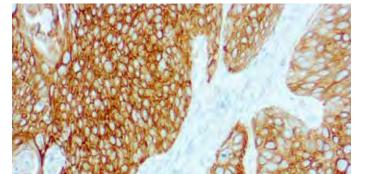
Cellular Localization: Cytoplasmic

**Specificity:** This antibody reacts with cytokeratin 5 intermediate filament protein. Basal cells of human epidermis express acidic cytokeratin 14 and basic cytokeratin 5. Cytokeratin 5 is a 58 kDa protein, which is closely related to cytokeratin 6. Cytokeratin 5 and 6 are expressed in basal cell epithelioma, basal cells of prostate, urothelium, vagina, squamous cell carcinomas of skin, tongue, epiglottis and rectal-anal region. Cytokeratin 5 can be useful in the distinction of mesotheliomas from most adenocarcinomas.

#### Cytokeratin 5/6

Clone: D5/16 B4

Catalog No.: Mob362 Concentrated PDM123 Prediluted



Formalin fixed paraffin embedded lung squamous cell carcinoma stained with Cytokeratin 5/6 (PDM123)

Immunogen: BALB/C mice were injected with cytokeratin 5.

Isotype: IgG1, kappa
Positive Control: Skin

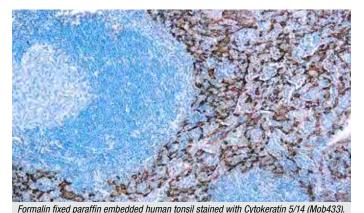
**Cellular Localization:** Cytoplasmic

**Specificity:** Cytokeratin 5 (58 kDa) is a high molecular weight, basic type of cytokeratin expressed in basal, intermediate and superficial cell layers of stratified epithelia as well as transitional epithelia, complex epithelia and in mesothelial cells and mesothelioma. Cytokeratin 6 (56 kDa) is also a high molecular weight, basic type cytokeratin expressed by proliferating squamous epithelium often paired with cytokeratin 16.

## Cytokeratin 5/14

Clone: XM26 + LL002

Catalog No.: Mob433 Concentrated **PDM140 Prediluted** 



**Immunogen:** XM26: prokaryotic recombinant protein corresponding to 103

amino acid portion of C-terminal region of the human cytokeratin 5 molecule. LL002: Synthetic peptide of the extreme C-terminal of human keratin-14.

Isotype: XM26, IgG1; LL002, IgG3 Positive Control: Skin, Tonsil **Cellular Localization:** Cytoplasmic

Specificity: This antibody cocktail reacts with cytokeratin 5 intermediate filament protein as well as the 50 kDa cytokeratin protein designated cytokeratin 14. Basal cells of human epidermis express acidic cytokeratin 14 and basic cytokeratin 5. Cytokeratin 5 is a 58 kDa protein, which is closely related to cytokeratin 6. Cytokeratin 5 and 6 are expressed in basal cell epithelioma, basal cells of prostate, urothelium, vagina, squamous cell carcinomas of skin, tongue, epiglottis and rectal-anal region. Cytokeratin 5 can be useful in the distinction of mesotheliomas from most adenocarcinomas.

Cytokeratin 14 belongs to the type A (acidic) subfamily of low MW cytokeratins and exists in combination with cytokeratin 15. This antibody can be useful to distinguish stratified epithelial cells from simple epithelial cells.



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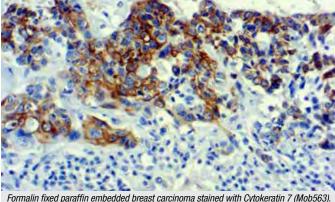
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Catalog No.: Mob563 Concentrated





Immunogen: Sonicated cytoskeleton fractions from SV40 transformed neonatal keratinocytes.

Isotype: IgG1

**Positive Control: Tonsil** 

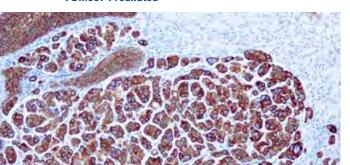
**Cellular Localization:** Cytoplasm

**Specificity:** Cytokeratin 7 is expressed in epithelial cells of ovary, lung and breast. It is often used in conjunction with cytokeratin 20 and CDX-2 in distinguishing pulmonary, ovarian and breast carcinomas (CK7+) from most colon carcinomas (CK7-).

#### Cytokeratin 7

Clone: **OV-TL** 12/30

Catalog No.: Mob057 Concentrated PDM097 Prediluted



Formalin fixed paraffin embedded human lung adenocarcinoma stained with Cytokeratin 7 antibody (PDM 097).

Immunogen: BALB/C mice were immunized with ovarian carcinoma cell line, OTN11.

Isotype: IgG1, kappa Positive Control: Skin, Lung

**Cellular Localization:** Cytoplasmic

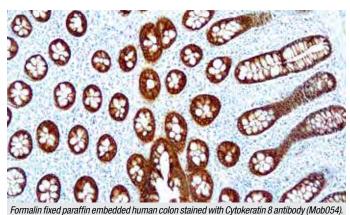
Specificity: This antibody recognizes keratin polypeptide of 54 kDa. It stains a number of epithelial cells including ductal and glandular epithelia. Stratified squamous epithelia are positive but transitional epithelium of the urinary tract does not show any staining. This antibody labels adenocarcinomas and transitional cell carcinomas but does not react with squamous cell carcinomas.



#### Cytokeratin 8, LMW

**Clone: 35**β**H11** 

Catalog No.: Mob054 Concentrated PDM117 Prediluted



Immunogen: BALB/C mice were immunized with cytoskeletal extract of

human hepatocellular carcinoma cell line, Hep3B.

Isotype: IgM, kappa

Positive Control: Skin, Colon Cellular Localization: Cytoplasmic

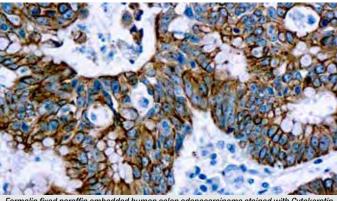
**Specificity:** This antibody recognizes keratin polypeptide of 54 kDa. It stains strongly with non-squamous epithelium but does not stain squamous epithelium. It reacts with the sweat gland and ducts in the skin. Adenocarcinomas of the ovary, gastrointestinal tract, ductal carcinoma of breast, pancreas and bile ducts, stain positive with this antibody.

#### Cytokeratin 8/18

Clone: 5D3

Catalog No.: Mob189 Concentrated

PDM070 Prediluted



Formalin fixed paraffin embedded human colon adenocarcinoma stained with Cytokeratin 8/18 antibody (PDM070).

Immunogen: Cytokeratins from the human breast carcinoma cell line MCF-7.

Isotype: IgG1

Positive Control: Skin

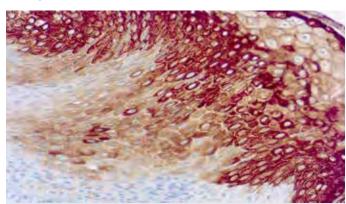
**Cellular Localization:** Cytoplasmic

**Specificity:** This antibody is specific to human cytokeratins 8 (52.5 kDa) and 18 (45 kDa). This antibody stains simple and glandular epithelium. This antibody can be useful for the identification of adenocarcinomas and most squamous cell carcinomas.



Clone: DE-K10

Catalog No.: Mob055 Concentrated



Formalin fixed paraffin embedded human skin stained with Cytokeratin 10 antibody (Mob055).

**Immunogen:** BALB/C mice were immunized with detergent insoluble extract of human epidermis.

Isotype: IgG1, kappa Positive Control: Skin

**Cellular Localization:** Cytoplasmic

**Specificity:** This antibody recognizes keratin polypeptide of 56.5 kDa. It stains suprabasal cells in the epidermis, thymic Hassall's bodies. Simple and glandular epithelia, transitional epithelium and adenocarcinomas are negative with this antibody.

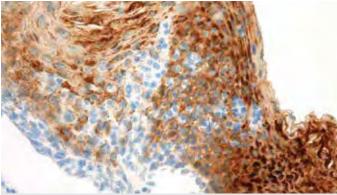
#### Cytokeratin 13

Clone: KS-1A3

Catalog No.: Mob443 Concentrated







Formalin fixed paraffin embedded human tonsil stained with Cytokeratin 13 antibody (Mob433).

**Immunogen:** Cultured A431 cells from a human epidermoid carcinoma of the vulva.

**Isotype:** IgG1

Positive Control: Skin

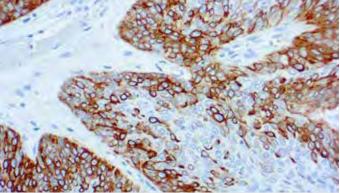
**Cellular Localization:** Cytoplasmic

**Specificity:** This antibody is specific to 54 kDa protein. Cytokeratin 13 belongs to the type A (acidic) subfamily of low molecular weight cytokeratins and exists in combination with cytokeratin 4. Cytokeratin 13 is expressed in squamous, non-keratinized epithelium, transitional epithelium and myoepithelium. This antibody is useful for the identification of carcinomas of trachea, sweat glands, bladder, ectocervix, tongue, esophagus, anal canal and the basal layer of keratinized epidermis.

#### Cytokeratin 14

Clone: LL002

Catalog No.: Mob186 Concentrated PDM138 Prediluted



Formalin fixed paraffin embedded lung squamous cell carcinoma stained with Cytokeratin 14 antibody (Mob186).

**Immunogen:** A synthetic peptide of 15 aa residues from the C-terminus of human keratin 14.

Isotype: IgG3

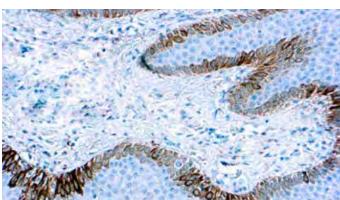
Positive Control: Skin, Squamous Cell Carcinoma

**Cellular Localization:** Cytoplasmic

**Specificity:** This antibody is specific to 50 kDa cytokeratin protein designated cytokeratin 14. Cytokeratin 14 belongs to the type A (acidic) subfamily of low molecular weight cytokeratins and exists in combination with cytokeratin 15. This antibody can be used to distinguish stratified epithelial cells from simple epithelial cells.

#### Cytokeratin 15 Clone: LHK15

Catalog No.: Mob305 Concentrated



Formalin fixed paraffin embedded human skin stained with Cytokeratin 15 antibody (Moh.305)

**Immunogen:** A 17-mer synthetic peptide from the C-terminus of human cytokeratin 15.

Isotype: IgG2a, kappa
Positive Control: Skin

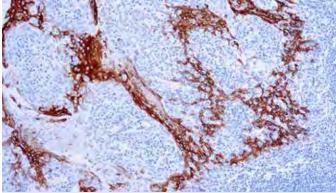
**Cellular Localization:** Cytoplasmic

**Specificity:** Cytokeratin 15 is a type I cytokeratin without a defined type II partner. Cytokeratin 15 is expressed primarily in the basal keratinocytes of stratified tissues, including the fetal epidermis and fetal nail.

#### Cytokeratin 16

Clone: LL025

Catalog No.: Mob273 Concentrated PDM273 Prediluted



Formalin fixed paraffin embedded human tonsil stained with Cytokeratin 16 antibody (Moh273)

**Immunogen:** BALB/C mice were injected with a synthetic peptide from the C-terminus of human cytokeratin 16.

Isotype: IgG1

Positive Control: Skin, Squamous Cell Carcinoma

**Cellular Localization:** Cytoplasmic

**Specificity:** This antibody is specific to a 48 kDa protein, which is identified as cytokeratin 16. Cytokeratin 16 is expressed in keratinocytes, which are undergoing rapid turnover in the suprabasal region. High concordance was found between the carcinomas immunostaining with the basal cell and the hyperproliferation-related keratins.

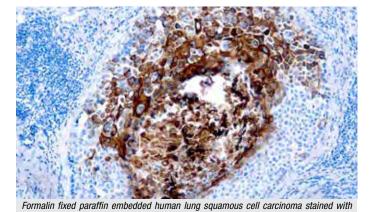
#### Cytokeratin 17

Clone: E3

Catalog No.: Mob127 Concentrated PDM206 Prediluted







Immunogen: Cytoskeletal fraction of rat colon epithelium.

**Isotype:** IgG2b, kappa **Positive Control:** Skin

Cytokeratin 17 antibody (Mob127).

**Cellular Localization:** Cytoplasmic

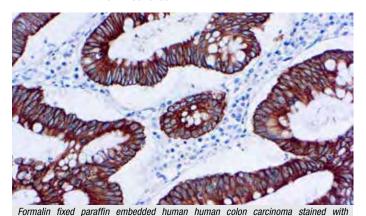
**Specificity:** This antibody is specific to 46 kDa cytokeratin protein designated cytokeratin 17. It reacts with basal cells in complex epithelia and

reacts strongly with squamous cell carcinomas.

Cytokeratin 18

Clone: DC10

Catalog No.: Mob187 Concentrated **PDM164 Prediluted** 



Cytokeratin 18 antibody (Mob187).

Immunogen: BALB/C mice were injected with PMC-42 human breast

carcinoma cell line. Isotype: IgG1

Positive Control: Skin

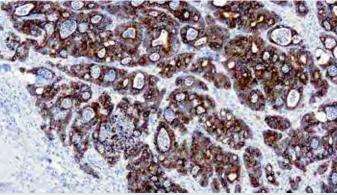
**Cellular Localization:** Cytoplasmic

Specificity: This antibody is specific to human cytokeratin 18 of 45 kDa. Cytokeratin 18 belongs to a family of acidic type A keratins and exists along with cytokeratin 8 in most simple ductal and glandular epithelia. This antibody does not react with squamous epithelium. It reacts with benign and malignant epithelial lesions as well as a majority of adenocarcinomas and basal cell carcinomas.

#### Cytokeratin 19

Clone: A53-B/A2.26

Catalog No.: Mob274 Concentrated PDM192 Prediluted



Formalin fixed paraffin embedded human human colon carcinoma stained with Cytokeratin 19 antibody (Mob274).

Immunogen: BALB/C mice were injected with human breast cancer

MCF-7 cells.

Isotype: IgG2a, kappa Positive Control: Skin, Tonsil **Cellular Localization:** Cytoplasmic

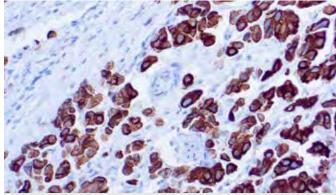
Specificity: This antibody is specific to a 40 kDa protein, cytokeratin 19. Its epitope maps between amino acids 312-335. This antibody reacts with

MCF-7 cells, which are known to contain cytokeratin 19.

Cytokeratin 20

**Clone: KS 20.8** 

Catalog No.: Mob123 Concentrated PDM049 Prediluted



Formalin fixed paraffin embedded human colon carcinoma stained with Cytokeratin 20 antibody (PDM049).

Immunogen: Cytokeratins isolated from human micro-dissected villi of human duodenal mucosa.

Isotype: IgG2a, kappa

Positive Control: Skin, Colon Carcinoma Cellular Localization: Cytoplasmic

**Specificity:** Cytokeratin 20 is less acidic than the other type I cytokeratins and is of particular interest because of its restricted range of expression. This antibody reacts with cytokeratin polypeptide of 46 kDa in immunoblot analyses. Studies have shown that a marked difference exists in the expression of Cytokeratin 20 among various carcinomas.

#### Cytokeratin, Acidic (AE1)

Clone: AE1

Catalog No.: Mob092 Concentrated

PDM043 Prediluted



Formalin fixed paraffin embedded human lung squamous cell carcinoma stained with Cytokeratin AE1 antibody (Mob092).

Immunogen: BALB/C mice were immunized with human epidermal keratin.

Isotype: IgG1, kappa Positive Control: Skin

**Cellular Localization:** Cytoplasm

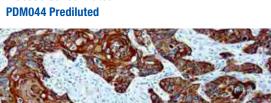
Specificity: This antibody recognizes most of the acidic (Type I) keratins. It recognizes keratin polypeptides of 50 and 56.5 kDa. In keratinized epidermis, 50 kDa keratin is present in the basal layer, while 56.5 kDa keratin is present in suprabasal layers. This antibody can be used to stain distinct cell layers in an epithelial tissue and various neoplasms of epithelial origin.



#### Cytokeratin, Basic (AE3)

**Clone: AE3** 

Catalog No.: Mob093 Concentrated



Formalin fixed paraffin embedded human lung squamous cell carcinoma stained with Cytokeratin AE3 antibody (Mob093).

Immunogen: BALB/C mice were immunized with human epidermal keratin.

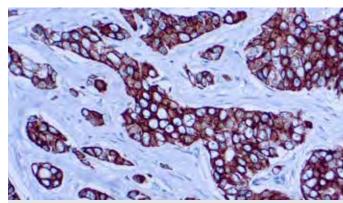
Isotype: IgG1, kappa
Positive Control: Skin

**Cellular Localization:** Cytoplasm

**Specificity:** This antibody recognizes most of the basic (Type II) keratins. It recognizes keratin polypeptides of 58 and 65 to 67 kDa. In keratinized epidermis, 58 kDa keratin is present in the basal and suprabasal layers, while 65 to 67 kDa keratin is present in the cells above the basal layers. This antibody can be used to stain different cell layers in an epithelial tissue and various neoplasms of epithelial origin.

Clone: CAM 5.2

Catalog No.: Mob469 Concentrated PDM181 Prediluted



Formalin fixed paraffin embedded human breast tissue stained with Cam 5.2 (Mob469).

**Immunogen:** Anti-Cytokeratin, clone CAM 5.2, is derived from hybridization of mouse P3/NS-1/1-Ag4-1myeloma cells with spleen cells from BALB/c mice immunized with the human colorectal carcinoma cell line HT29.

Isotype: IgG2a

Positive Control: Lung, colon, prostate and breast tissue.

Cellular Localization: Cytoplasmic.

**Specificity:** Anti-Cytokeratin (CAM 5.2) reagent has a primary reactivity with human keratin proteins that correspond to Moll's peptides #7 and #8, Mr 48 and 52 kDa (kd), respectively. Cytokeratin 7 and 8 are present on secretory epithelia of normal human tissue but not onstratified squamous epithelium. Anti-Cytokeratin (CAM 5.2) stains most epithelial-derived tissue, including: liver, renal tubular epithelium, hepatocellular and renal cell carcinomas. Anti-Cytokeratin (CAM 5.2) might not react with some squamous cell carcinomas.

# Diagnostic BioSystems

is committed to enhancing immunohistochemistry test results at an affordable cost to support pathologists in making increasingly difficult diagnostic decisions. Our primary antibodies are well suited for both single-step and two-step polymer systems.

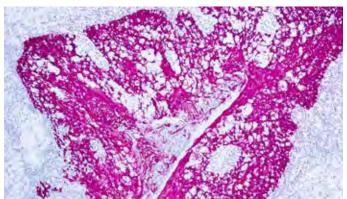
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#### Cytokeratin, HMW (34βE12)

**Clone: 34**β**E12** 

Catalog No.: Mob059 Concentrated PDM074 Prediluted



Formalin fixed paraffin embedded human tonsil stained with Cytokeratin HMW antibody (PDM074).

**Immunogen:** BALB/C mice were immunized with solubilized keratin extract from human stratum corneum.

Isotype: IgG1, kappa

Positive Control: Skin, Prostate Cellular Localization: Cytoplasmic

**Specificity:** This antibody recognizes keratin polypeptides of 68, 58, 56.5 and 50 kDa in the stratum corneum. The antibody reacts with squamous, ductal and other complex epithelia. It stains adenocarcinomas, breast, pancreas, bile duct, salivary gland and transitional cell carcinomas.

#### Cytokeratin, Pan

Catalog No.: RP167 Concentrated PDR167 Prediluted



Formalin fixed paraffin embedded human colon adenocarcinoma stained with Cytokeratin, Pan antibody (RP167).

Immunogen: Recombinant Full-length human KRT76 and KRT77 proteins.

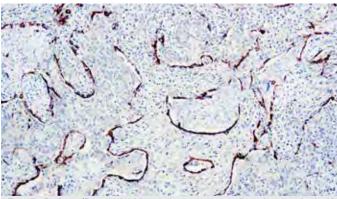
**Positive Control:** Colon adenocarcinoma **Cellular Localization:** Cytoplasmic

**Specificity:** Many studies have shown the usefulness of keratins as markers in cancer research and tumor diagnosis. It is a broad spectrum anti pan-cytokeratin antibody, which differentiates epithelial tumors from non-epithelial tumors e.g. squamous vs. adenocarcinoma of the lung, liver carcinoma, breast cancer, and esophageal cancer. It may be useful to characterize the source of various neoplasms and to study the distribution of cytokeratin containing cells in epithelia during normal development and during the development of epithelial neoplasms. This antibody stains cytokeratins present in normal and abnormal human tissues and has high sensitivity in the recognition of epithelial cells and carcinomas.

#### Cytokeratin, Pan (AE1/AE3)

Clone: AE1/AE3

Catalog No.: Mob190 Concentrated PDM072 Prediluted



Formalin fixed paraffin embedded human lung squamous cell carcinoma stained with Cytokeratin AE1/AE3 (PDM072).

Immunogen: BALB/C mice were immunized with human epidermal keratin.

Isotype: AE1, IgG1, kappa; AE3, IgG1, kappa

Positive Control: Skin, Tonsil Cellular Localization: Cytoplasmic

**Specificity:** This AE1/AE3 antibody cocktail recognizes most of the acidic (Type I) keratins as well as basic (Type II). It recognizes keratin polypeptides of 40, 48, 50, 52, 54, 56.5, 58, 59 and 64 to 67 kDa. In keratinized epidermis, 50 kDa keratin is present in the basal layer, while 56.5 kDa keratin is present in suprabasal layers. 58 kDa keratin is present in the basal and suprabasal layers, while 65 to 67 kDa keratin is present in the cells above the basal layers. This antibody can be used to stain distinct cell layers in an epithelial tissue and various neoplasms of epithelial origin.

### Cytokeratin, Wide Spectrum

Catalog No.: RP010 Concentrated PDR035 Prediluted



Formalin fixed paraffin embedded human skin stained with Cytokeratin Wide Spectrum antibody (PDR035).

**Immunogen:** Cytokeratin isolated from bovine muzzle epidermis.

Positive Control: Skin

**Cellular Localization:** Cytoplasmic

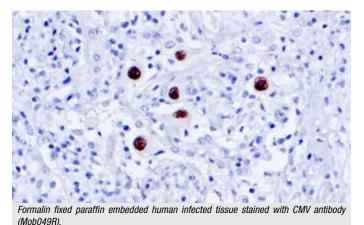
**Specificity:** This antibody reacts with cytokeratins of 58, 56, 52, 60, 51, 48 and 68 kDa MW. This antibody is well suited for the staining of a broad spectrum of human keratins.



### Cytomegalovirus (CMV Cocktail)

Clone: DDG9 + CCH2

Catalog No.: Mob049R Concentrated PDM075R Prediluted



**Immunogen:** BALB/C mice were immunized with cytomegalovirus infected cell lysate.

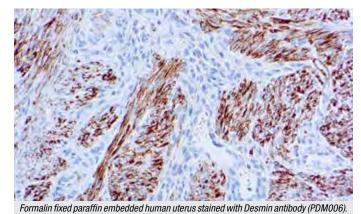
Isotype: DDG9, IgG2a, kappa; CCH2, IgG1, kappa

**Positive Control:** Infected lung **Cellular Localization:** Nuclear

**Specificity:** This cocktail antibody stains infected cells giving a nuclear staining pattern with an immediate early and an early CMV antigen.

Desmin Clone: D33

Catalog No.: Mob060 Concentrated PDM006 Prediluted



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**Immunogen:** BALB/C mice were immunized with purified desmin from human muscle.

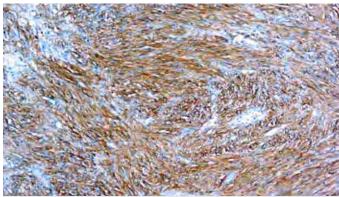
Isotype: IgG1, kappa Positive Control: Leiomyoma Cellular Localization: Cytoplasmic

**Specificity:** This antibody reacts with desmin protein of 53 kDa. Both striated as well as smooth muscle cells stain well with this antibody.

RUO

DOG 1 Clone: DOG1.1

Catalog No.: Mob466 Concentrated PDM170 Prediluted



Formalin fixed paraffin embedded gastrointestinal stromal tumor staiend with DOG1 antibody (Mob466).

Immunogen: A synthetic peptide of human DOG1 protein.

Isotype: IgG

**Positive Control:** Gastrointestinal stromal tumor tissue **Cellular Localization:** Cytoplasmic and membrane

**Specificity:** DOG1 is expressed ubiquitously in gastrointestinal stromal tumors irrespective of c-Kit or PDGFR alpha mutation status. Reactivity for DOG1 may aid in the diagnosis of gastrointestinal stromal tumors, including PDGFRA mutants that fail to express c-Kit antigen, and lead to appropriate treatment with imatinib mesylate, an inhibitor of the c-Kit tyrosine kinase.

### **E2F-1 Transcription Factor**

Clone: KH95

Catalog No.: Mob381 Concentrated







**Immunogen:** BALB/C mice were immunized with a recombinant human E2F-1 protein.

Isotype: IgG2a

Positive Control: Tonsil, breast carcinoma

**Cellular Localization:** Nuclear

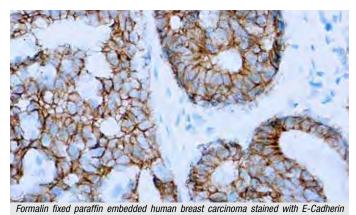
**Specificity:** This antibody reacts with a protein of 60 kDa. E2Fs are DNA-binding proteins, which associate with negative regulators, such as the retinoblastoma p107 protein, resulting in an altered rate of gene transcription. E2F-1 is proposed to be involved in several cellular processes that range from tumor suppression, cell progression and oncogenesis. E2F-1 over expression can also drive cells into apoptosis.

IVD only for markets outside the U.S. RUO for U.S. market.

### E-Cadherin Clone: SPM471

Catalog No.: Mob550 Concentrated

PDM182 Prediluted



Immunogen: Recombinant protein encoding human Cadherin-E 600-707aa

Isotype: IgG 2b/k

Positive Control: Breast carcinoma, Colon carcinoma, Appendix

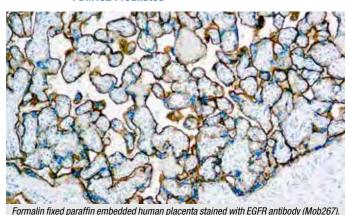
Cellular Localization: Cell Membrane

Specificity: E-cadherin (uvomorulin, cell-CAM120/80) is a calcium dependent cell adhesion molecule expressed predominately in epithelial tissues. It plays an important role in the growth and development of cells via the mechanisms of control of tissue architecture and the maintenance of tissue integrity. Numerous studies have demonstrated that reduction and/ or loss of E-cadherin expression in carcinomas correlates positively with the potential of these tumors for invasion and metastasis.

### EGFR (Epidermal Growth Factor Receptor)

Clone: 111.6

Catalog No.: Mob267 Concentrated **PDM132 Prediluted** 



Immunogen: BALB/C mice were injected with extracellular domain of

human recombinant EGFR protein.

Isotype: IqG1

Positive Control: Placenta

**Cellular Localization:** Cell membrane

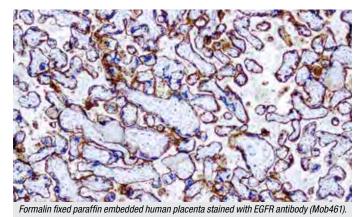
**Specificity:** This antibody is specific to a 170 kDa protein. EGF-Receptor is a member of the type I family of growth factor receptors. The antibody recognizes an epitope mapping in the extracellular domain of EGFR. Overexpression of EGFR has been reported in tumors of breast, brain, bladder, lung, stomach, head and neck, esophagus, cervix, vulva, ovary and endometrium. EGFR is over expressed in squamous cell carcinoma.

IVD only for markets outside the U.S. RUO for U.S. market.

### EGFR (Epidermal Growth Factor Receptor)

Clone: 31G7

Catalog No.: Mob461 Concentrated PDM226 Prediluted



Immunogen: Human EGFR derived from A-431 cell line.

Isotype: IgG1

Positive Control: Breast carcinoma, Placenta Cellular Localization: Membrane, cytoplasm

Specificity: The epidermal growth factor receptor (EGFR) is a 170 kDa transmembrane protein consisting of an extracellular EGF-binding domain, a short transmembrane region and an intracellular domain with ligandactivated tyrosine kinase activity. EGFR is expressed in many normal epithelial tissues, particularly in the basal layers of stratified epithelium and in squamous epithelium. Over expression of EGFR has been observed in many types of neoplasia, as a result of gene amplification and/or increased protein transcription.

IVD only for markets outside the U.S. RUO for U.S. market.

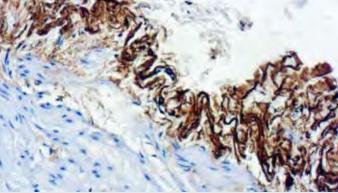




### Elastin Clone: BA4

Catalog No.: Mob230 Concentrated





Formalin fixed paraffin embedded human renal cell carcinoma stained with Elastin antibody (Mob230).

**Immunogen:** Bovine  $\alpha$ -elastin.

Isotype: IgG1

Positive Control: Heart, Kidney

**Cellular Localization:** Connective tissue

**Specificity:** This antibody recognizes insoluble elastin,  $\alpha$ -elastin, soluble non-cross linked precursor of elastin (tropoelastin). Elastin is an important polymeric protein of connective tissue that imparts elasticity to vertebrate elastic tissues.

### **Epithelial Antigen**

Clone: VU-1D9

Catalog No.: Mob062 Concentrated PDM077 Prediluted



Formalin fixed paraffin embedded human breast carcinoma stained with Epithelial

Immunogen: BALB/C mice were immunized with small cell lung carcinoma.

Isotype: IgG1, kappa

Positive Control: Breast carcinoma **Cellular Localization:** Cell membrane

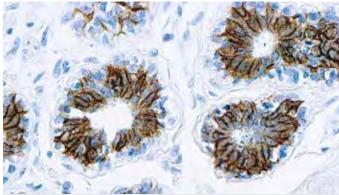
Specificity: This antibody reacts with two glycoproteins of 34 and 49 kDa present on the epithelial cells. It stains with simple epithelia and basal layers

of stratified non-keratinized squamous epithelium.

### **Epithelial Antigen**

Clone: Ber-EP4

Catalog No.: Mob406 Concentrated PDM131 Prediluted



Formalin fixed paraffin embedded human breast carcinoma stained with Epithelial Antigen (PDM131).

Immunogen: BALB/C mice were immunized with human breast carcinoma

cell line, MCF-7. Isotype: IgG1, kappa

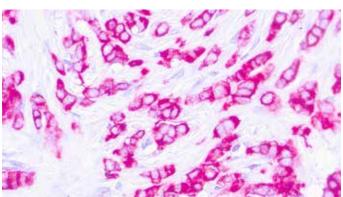
Positive Control: Kidney, Breast carcinoma Cellular Localization: Cell membrane

**Specificity:** Epithelial antigen is a cell surface glycoprotein and is broadly distributed in epithelial cells and displays a highly conserved expression in carcinomas. Epithelial antigen has been shown to play an important role as a tumor cell marker in lymph nodes from patients with esophageal carcinoma. Epithelial antigen can be used to distinguish between basal cell and basosquamous carcinomas and squamous cell carcinoma of the skin.

### **Epithelial Membrane Antigen (EMA)**

Clone: E29

Catalog No.: Mob401 Concentrated **PDM204 Prediluted** 



Formalin fixed paraffin embedded human breast carcinoma stained with Epithelial Antigen (Mob401).

Immunogen: BALB/C mice were immunized with delipidated human milk fat globule membrane preparation.

Isotype: IgG2a, kappa

Positive Control: Breast carcinoma

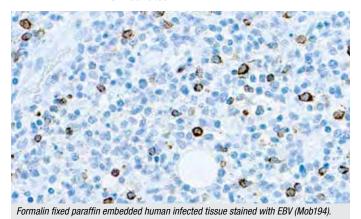
Cellular Localization: Cell membrane and cytoplasmic

**Specificity:** This antibody reacts with an antigen of 265-400 kDa belonging to a heterogeneous group of heavily glycosylated proteins called human milk fat globule proteins. It stains both normal and neoplastic cells. Among normal epithelia, it reacts strongly with mammary epithelium and glandular epithelia but shows a patchy staining with squamous epithelium.

## Epstein-Barr Virus (EBV)

Clone: CS1, CS2, CS3, CS4

Catalog No.: Mob194 Concentrated PDM128 Prediluted



**Immunogen:** Recombinant fusion protein containing sequences of bacterial  $\beta$ -galactosidase and EBV encoded latent membrane protein.

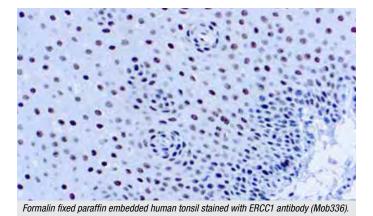
Isotype: IgG1

**Positive Control:** Infected lymphoblastoma **Cellular Localization:** Cytoplasmic

**Specificity:** This antibody is specific to 60 kDa latent membrane protein (LMP-1) encoded by the BNLF1 gene of the EBV. Each clone reacts with different epitopes on the hydrophilic C-terminus of the cytoplasmic domain of LMP-1. This antibody stains strongly with EBV positive lymphoblastoid cell lines and EBV infected B cell immunoblasts in infectious mononucleosis. *IVD only for markets outside the U.S. RUO for U.S. market*.

ERCC1 Clone: 8F1

Catalog No.: Mob336 Concentrated PDM151 Prediluted



**Immunogen:** BALB/C mice were injected with full length recombinant human ERCC1 protein.

Isotype: IgG2b

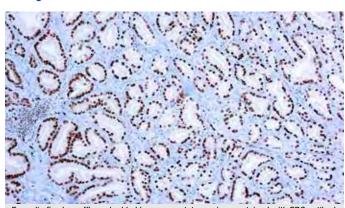
Positive Control: Tonsil
Cellular Localization: Nuclear

**Specificity:** This antibody reacts with a 33-36 kDa protein known as ERCC1 (excision repair cross complementing) polypeptide. ERCC1 is required for nucleotide excision repair of damaged DNA and is homologous to RAD10. In mammalian cells, XPG cleaves 3' of the DNA lesion while ERCC1-XPF complex makes the 5' incision.



Clone: EP111

Catalog No.: RMPD034 Prediluted



Formalin fixed paraffin embedded human prostate carcinoma stained with ERG antibody (RMPD034).

**Immunogen:** A synthetic peptide corresponding to residues on the C-terminus of the human ERG protein.

Isotype: Rabbit IgG

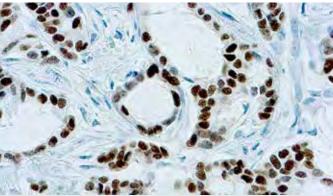
**Positive Control:** Prostate carcinoma **Cellular Localization:** Nuclear

**Specificity:** ERG, the ETS related gene, belongs to the ETS family that plays important roles in cell development, differentiation, proliferation, apoptosis and tissue remodeling. The ERG antibody identifies endothelial cells, lymphocytes and prostate cancer cells.

### Estrogen Receptor (ER)

Clone: SP1

Catalog No.: RMAB001 Concentrated RMPD001 Prediluted



Formalin fixed paraffin embedded human breast carcinoma stained with Estrogen Receptor antibody (RMPD001).

**Immunogen:** Synthetic peptide derived from C-terminal of human estrogen receptor.

Isotype: IgG

**Positive Control:** Breast Carcinoma **Cellular Localization:** Nuclear

**Specificity:** This antibody recognizes a protein of 67kDa, which is identified as estrogen receptor (ER). ER content of breast cancer tissue is an important parameter in the prediction of prognosis and response to endocrine therapy. This antibody strongly stains the nucleus of epithelial cells in breast carcinomas. The ER is an important regulator of growth and differentiation in the mammary gland. Presence of ER in breast tumors indicates an increased likelihood of response to anti-estrogen (e.g. tamoxifen) therapy.

IVD only for markets outside the U.S. RUO for U.S. market.



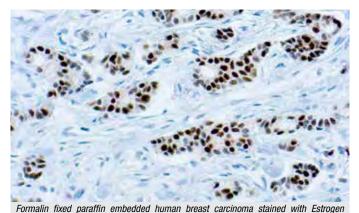




### Estrogen Receptor (ER)

Clone: 6F11

Catalog No.: Mob121 Concentrated PDM048 Prediluted



Receptor antibody (Mob121).

Immunogen: Prokaryotic recombinant protein corresponding to the fulllength estrogen receptor molecule.

Isotype: IgG1

Positive Control: Breast carcinoma **Cellular Localization:** Nuclear

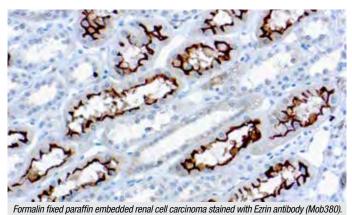
Specificity: This antibody is specific to estrogen receptor, which is associated with superior prognosis and a better response to anti-estrogen therapy. The nuclei of the estrogen receptor positive cells stain very strongly with this antibody, without any staining in the cytoplasm.

IVD only for markets outside the U.S. RUO for U.S. market.

### Ezrin/p81/Cytovillin

Clone: 3C12

Catalog No.: Mob380 Concentrated



Immunogen: BALB/C mice were immunized with a recombinant fragment of human ezrin corresponding to amino acid 362-585.

Isotype: IgG1

Positive Control: Lung

Cellular Localization: Cell membrane

Specificity: This antibody reacts with a protein of 81 kDa. Ezrin serves as a tyrosine kinase substrate and is phosphorylated in EGF-stimulated cells. Ezrin is a cytoplasmic protein, enriched in microvilli and other cell surfaces. Ezrin has an actin-binding capacity. Ezrin is expressed in epithelial cells but not in mesenchymal cells. Ezrin is also expressed by certain epithelial tumors, such as renal cell adenocarcinomas.

### Factor VIII (Von Willebrand Factor)

**Clone: F8/86** 

Catalog No.: Mob196 Concentrated PDM019 Prediluted



**Immunogen:** Von Willebrand factor isolated from human plasma.

Isotype: IgG1, kappa Positive Control: Tonsil

**Cellular Localization:** Cytoplasmic

Specificity: This antibody reacts with Von Willebrand factor in endothelial

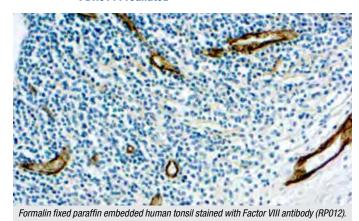
cells. It also reacts with megakaryocytes in human bone marrow.

### Factor VIII (Von Willebrand Factor)

Catalog No.: RP012 Concentrated PDR014 Prediluted







**Immunogen:** Factor VIII related antigen isolated from human plasma.

Positive Control: Tonsil

**Cellular Localization:** Cytoplasmic

Specificity: This antibody reacts with human factor VIII related antigen. It stains endothelial cells and megakaryocytes in various human tissues. This antibody does not cross-react with any other cell types.



### Factor XIII-A

Catalog No.: RP103 Concentrated PDR054 Prediluted

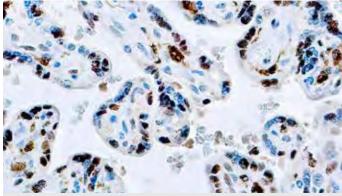


Fascin-1 Clone: 55k-2

Catalog No.: Mob560 Concentrated PDM560 Prediluted







Formalin fixed paraffin embedded human placenta stained with Factor XIII-A antibody (RP103).

Immunogen: Recombinant protein corresponding to A-subunit of coagulation Factor XIII a.

Positive Control: Placenta

**Cellular Localization:** Cytoplasmic, nuclear

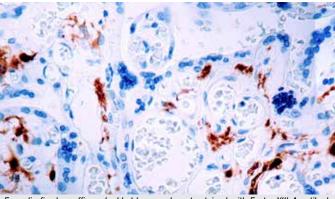
**Specificity:** This antibody reacts with a 160 kDa (unreacted dimer) and 80 kDa (reduced monomer) protein. Factor XIII is a  $\beta$ -globulin found in plasma and is composed of two subunits, Factor XIII-A and Factor XIII-B. Factor XIII-A is the catalytic subunit and is a dimer of M.W. 160 kDa. Factor XIII is a dermal dendrocyte marker and shows variable reaction with these types of tumors. Factor XIII can be used for histiocytic phenotyping and has been reported to mark capillary hemangiomas and tumors of the central nervous system.



Catalog No.: Mob321 Concentrated PDM141 Prediluted







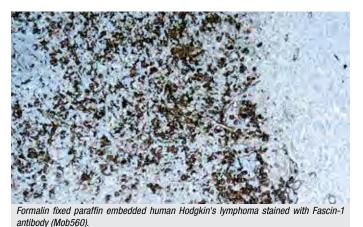
Formalin fixed paraffin embedded human placenta stained with  $\overline{F}$ actor XIII-A antibody (Mob321).

**Immunogen:** BALB/C mice were injected with recombinant human protein corresponding to A-subunit of coagulation Factor XIII.

Isotype: IgG1, kappa
Positive Control: Placenta

Cellular Localization: Cytoplasmic, nuclear

**Specificity:** This antibody is specific to 160 kDa protein known as Factor XIII-A. Factor XIII is a  $\beta$ -globulin found in plasma and is composed of two subunits, Factor XIII-A and Factor XIII-B. Factor XIII-A is the catalytic subunit and is a dimer of M.W. 160 kDa. Factor XIII is a dermal dendrocyte marker and v variable reaction with these types of tumors.



Immunogen: Human fascin-1 Isotype: IgG1, kappa

Positive Control: Hodgkin's lymphoma, ovary

**Cellular Localization:** Cytoplasmic

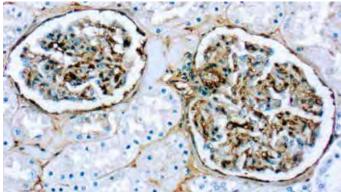
Specificity: This marker may be helpful to distinguish between Hodgkin lymphoma and non-Hodgkin lymphoma in difficult cases. Also, the lack of expression of fascin-1 in the neoplastic follicles in follicular lymphoma may be helpful in distinguishing these lymphomas from reactive follicular hyperplasia in which the number of follicular dendritic cells is normal or increased. Antibody to fascin-1 has been suggested as a prognostic marker in neuroendocrine neoplasms of the lung as well as in ovarian cancer. Fascin-1 expression may be induced by Epstein-Barr virus (EBV) infection of B cells with the possibility that viral induction of fascin in lymphoid or other cell types must also be considered in EBV-positive cases.

#### Fibronectin

Catalog No.: RP013 Concentrated PDR170 Prediluted







Formalin fixed paraffin embedded human kidney stained with Fibronectin antibody (RPO12)

**Immunogen:** Fibronectin isolated from a pool of normal human plasma.

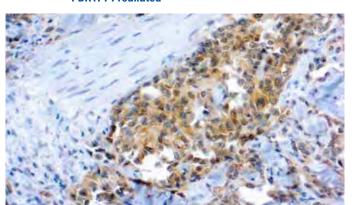
Positive Control: Kidney

Cellular Localization: Basement membrane, connective tissue

**Specificity:** This antibody reacts with human fibronectin in liver, tonsil, skin and kidney. Traces of contaminating antibodies have been removed by solid-phase adsorption. Only the fibronectin arch was observed in crossed immunoelectrophoresis.

### FIk-1/KDR/VEGFR2

Catalog No.: RP076 Concentrated PDR171 Prediluted



Formalin fixed paraffin embedded human skin stained with Flk-1 antibody (RP076).

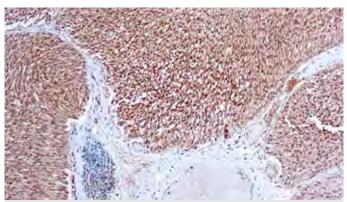
**Immunogen:** A synthetic peptide derived from the C-terminus of the precursor form of the mouse Flk-1.

Positive Control: Angiosarcoma Cellular Localization: Cytoplasmic

**Specificity:** This antibody reacts with a 180 kDa protein, known as Flk-1, KDR or vascular endothelial growth factor receptor 2 (VEGFR2). Flk-1 is a cell membrane receptor kinase. Flk-1 is a high affinity receptor for vascular endothelial growth factor and is putatively involved in the growth of endothelial cells and angiogenesis.

#### FIt-1/VEGFR1

Catalog No.: RP077 Concentrated



Formalin fixed paraffin embedded human bladder carcinoma stained with Flt-1 antibody (RP077).

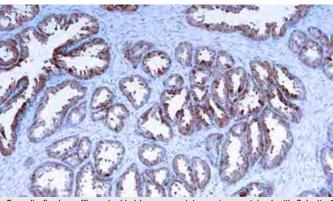
**Immunogen:** A synthetic peptide derived from the C-terminus of the FIt-1 precursor of human origin.

Positive Control: Angiosarcoma Cellular Localization: Cytoplasmic

**Specificity:** This antibody reacts with a 180 kDa protein, known as Flt-1 or vascular endothelial growth factor receptor 1 (VEGFR1). Flt-1 is a cell membrane receptor kinase. Flk-1 has a high affinity receptor for vascular endothelial growth factor and is putatively involved in the growth of endothelial cells and angiogenesis.

Galectin-3

Catalog No.: Mob541 Concentrated PDM541 Prediluted



Formalin fixed paraffin embedded human prostate carcinoma stained with Galectin-3 (Moh541)

**Immunogen:** Raised against a synthetic sequence of amino acids 2-31 of human origin

Isotype: IgG1

Positive Control: Colon carcinoma, papillary thyroid carcinoma

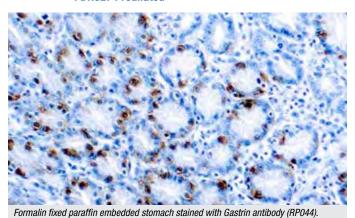
Cellular Localization: Cytoplasmic and Nuclear

**Specificity:** Galectin-3 is expressed in colonic and intestinal epithelium, inflammatory macrophages, papillary and follicular carcinomas, neoplastic astrocytes and some B and T lymphocytes. Upregulated expression of galectin-3 is involved in cancer progression and metastasis. Galectin-3 mediates the endocytosis of  $\beta 1$  Integrins in a lactose-dependent manner and is associated with thyroid malignancy and Crohn's disease. It may also be used as a marker for diagnosing cases involving Hurthle cell adenomas and carcinomas.

### Gastrin

IVD

Catalog No.: RP044 Concentrated PDR027 Prediluted



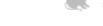
www.wawaw. Dagamhinant wastein asniverstad to I/LII

Immunogen: Recombinant gastrin conjugated to KLH.

Positive Control: Stomach
Cellular Localization: Cytoplasmic

**Specificity:** The antibody is specific against gastrin-containing cells. This anti-body reacts with human gastrin I and human gastrin I fragments. No cross-reactivity was observed with rat gastrin, human big gastrin, human gastrin releasing peptide, sulfated cholecystokinin amide, non-sulfated cholecystokinin amide and cholecystokinin.

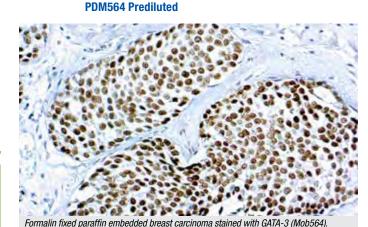
Catalog No.: Mob564 Concentrated



**PDR028 Prediluted** 







Immunogen: Peptide between trans-activation and DNA-binding domains of GATA-3.

Isotype: IgG1

Positive Control: Breast carcinoma, urothelial carcinomas

Cellular Localization: Nuclear

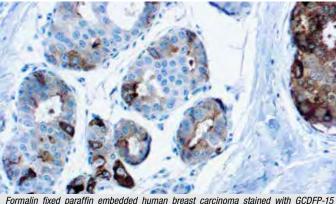
Specificity: GATA3 expression is primarily seen in breast carcinoma and urothelial carcinoma. Anti-GATA3 can also be useful in the identification of unknown primary carcinoma when carcinomas of the breast or bladder are a possibility.

### GCDFP-15

(Gross Cystic Disease Fluid Protein-15)

Clone: DBM15.52

Catalog No.: Mob526 Concentrated PDM261 Prediluted



Formalin fixed paraffin embedded human breast carcinoma stained with GCDFP-15

Immunogen: Recombinant human GCDFP-15 protein fragment (aa 41-146).

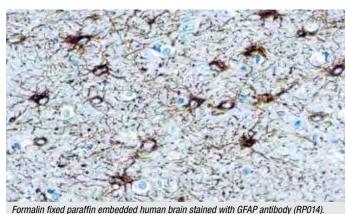
Isotype: IgG2a, kappa

Positive Control: Breast carcinoma

Cellular Localization: Cytoplasmic (Golgi bodies) and Secreted

Specificity: It recognizes a protein of 15kDa, identified as Gross cystic disease fluid protein 15 (GCDFP-15). It is a major protein component of benign breast gross cysts. It is a known marker of breast cancer, as it is found in approximately 50% of all breast cancer specimens. GCDFP-15, also known as PIP, for prolactin inducible protein, is a prolactin and androgen controlled protein. This antibody is useful in the identification of metastatic breast carcinoma, or fluid analysis.

## **GFAP (Glial Fibrillary Acidic Protein)** Catalog No.: RP014 Concentrated



**Immunogen:** Glial fibrillary protein isolated from cow spinal cord.

Positive Control: Brain

**Cellular Localization:** Cytoplasmic

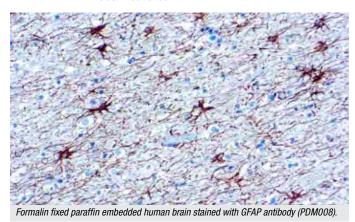
**Specificity:** This antibody reacts with human GFAP. In the central nervous system, this antibody stains astrocytes and some groups of ependymal cells. However, in the peripheral nervous system, it stains Schwann cells, satellite cells and enteric glial cells.

### **GFAP (Glial Fibrillary Acidic Protein)**



Clone: GA5

Catalog No.: Mob064 Concentrated PDM008 Prediluted



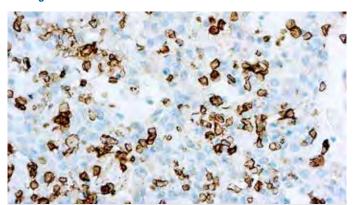
Immunogen: BALB/C mice were immunized with glial fibrillary protein from

porcine spinal cord. Isotype: IgG1, kappa Positive Control: Brain

**Cellular Localization:** Cytoplasm

Specificity: This antibody reacts with the 52 kDa intermediate filament protein GFAP in brain and spinal cord. It labels some astrocytes and some CNS ependymal cells but not oligodendrocytes or neurons. This antibody does not react with other intermediate filament proteins.

### GLUT-1 Catalog No.: RP128 Concentrated



Formalin fixed paraffin embedded human bladder stained with GLUT-1 antibody (RP128).

**Immunogen:** A synthetic peptide derived from C-terminal of human GLUT-1.

Positive Control: Breast carcinoma Cellular Localization: Cytoplasmic

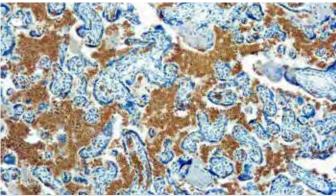
Specificity: This antibody reacts with a 55 kDa protein. Glucose is fundamental to the metabolism of mammalian cells. Several glucose transporter protein (Glut) isoforms have been identified and shown to function in response in insulin and IGF-1 induced signaling. GLUT-1 is detectable in many human tissues including those of the colon, lung, stomach, esophagus and breast. GLUT-1 immunoreactivity in some cancers, including trans-carcinoma of the urinary bladder, has been associated with aggressive behavior.

IVD only for markets outside the U.S. RUO for U.S. market.

## Glycophorin A

Clone: JC159

Catalog No.: Mob066 Concentrated PDM124 Prediluted



Formalin fixed paraffin embedded human placenta stained with Glycophorin A antibody

**Immunogen:** BALB/C mice were immunized with formalin fixed membrane from a hairy cell leukemia.

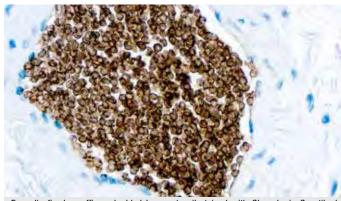
Isotype: IgG1, kappa Positive Control: Tonsil

Cellular Localization: Cell membrane

Specificity: This antibody is specific to erythroid cells at various stages of differentiation from the erythroblast to the mature red cell.

### Glycophorin C Clone: Ret40f

Catalog No.: Mob067 Concentrated PDM578 Prediluted



Formalin fixed paraffin embedded human tonsil stained with Glycophorin C antibody (Mob067).

Immunogen: BALB/C mice were injected with red cell ghosts.

Isotype: IgG1, kappa Positive Control: Tonsil

**Cellular Localization:** Cell membrane

**Specificity:** This antibody is specific to  $\beta$  sialoglycophorin also known as glycophorin C. Glycophorin C is found on the human erythrocyte membrane

and is one of four sialic acid-rich polypeptides.



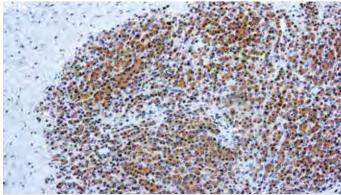
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Glypican-3 Clone: YP7

Catalog No.: Mob561 Concentrated

PDM561 Prediluted



Formalin fixed paraffin embedded human hepatocellular carcinoma stained with Glypican-3 (Mob561).

Immunogen: Human Glypican-3

Isotype: IgG1, Kappa

Positive Control: Thyroid carcinoma, hepatocellular carcinoma

Cellular Localization: Cytoplasmic

Specificity: Glypican-3 (GPC3) is a glycosylphospatidyl inositol-anchored membrane protein, which may also be found in a secreted form. Anti-GPC3 has been identified as a useful tumor marker for the diagnosis of hepatocellular carcinoma (HCC), hepatoblastoma, melanoma, testicular germ cell tumors, and Wilms' tumor. In patients with HCC, GPC3 is overexpressed in neoplastic liver tissue and elevated in serum, but is undetectable in normal liver, benign liver, and the serum of healthy donors. GPC3 expression is also found to be higher in HCC liver tissue than in cirrhotic liver or liver with focal lesions such as dysplastic nodules and areas of hepatic adenoma (HA) with malignant transformation. In the context of testicular germ cell tumors, GPC3 expression is up regulated in certain histologic subtypes, specifically yolk sac tumors and choriocarcinoma. A high level of GPC3 expression is also found in some types of embryonal tumors, such as Wilms' tumor and hepatoblastoma, with a low or undetectable expression in normal adjacent tissue. In patients with thyroid cancer, expression of GPC3 is dramatically enhanced in certain types of cancers: 100% in follicular carcinoma and 70% in papillary carcinoma. Expression of GPC3 in follicular carcinoma is significantly higher than that of follicular adenoma. In contrast, GPC3 is not expressed in anaplastic carcinoma.

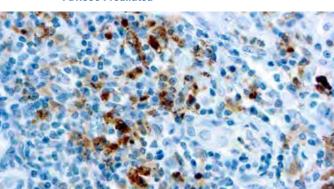
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### Granzyme B

Catalog No.: RP105 Concentrated **PDR050 Prediluted** 



Formalin fixed paraffin embedded human Hodgkin's lymphoma stained with Granzyme B antibody (RP105).

Immunogen: A synthetic peptide from the N-terminus of human granzyme B.

Positive Control: Tonsil

**Cellular Localization:** Cytoplasmic

Specificity: This antibody reacts with a 32 kDa protein. Granzymes are neutral serine proteases, which are stored in specialized lytic granules of cytotoxic T lymphocytes (CTL) and in natural killer (NK) cells. A number of granzymes (A to G) have been isolated and cloned. Human granzyme B is involved in target cell apoptosis during lymphocyte-mediated cytotoxicity. This antibody is useful in the localization of granzyme B containing lytic granules and for the characterization of activated CTL or NK cells.

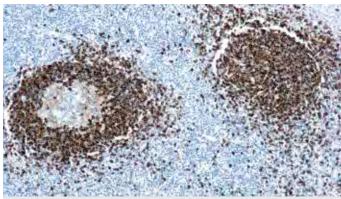
### Hairy Cell Leukemia

Clone: DBA.44

Catalog No.: Mob200 Concentrated PDM024 Prediluted







Formalin fixed paraffin embedded human tonsil stained with Hairy Cell Leukemia

Immunogen: DEAU cell line established from a large cell lymphoma.

Isotype: IgM, kappa Positive Control: Tonsil

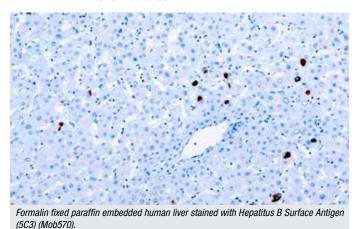
Cellular Localization: Cell membrane, cytoplasmic

Specificity: This antibody reacts with a subset of B-lymphocytes localized in the follicular mantle zone. It reacts with 97% of hairy cell leukemia cases. This antibody shows strong positive staining of about 35% of cases of high grade B cell lymphomas.

### **HBsAq** Clone: 5C3

Catalog No.: Mob570 Concentrated





Immunogen: HBsAg (ad/ay) protein.

Isotype: IgG2a

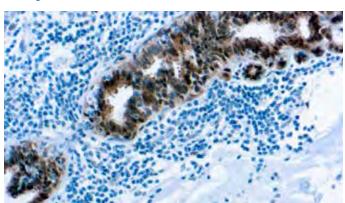
Positive Control: Infected liver **Cellular Localization:** Cytoplasmic

Specificity: This antibody stains the cytoplasm of antigen-positive liver cells in patients with Type B viral hepatitis. This antibody reacts with the 'a' determinant present on the HBsAg subtypes ayw1, ayw2, ayw3, ayw4, ayr, adw2, adw4 and adr. It does not react with normal tissues.

### Heat Shock Protein 70 (HSP 70)

Clone: W27

Catalog No.: Mob269 Concentrated



Formalin fixed paraffin embedded human breast carcinoma stained with Heat Shock Protein 70 antibody (Mob269).

Immunogen: BALB/C mice were injected with purified HSP70 protein.

Isotype: IqG2a

Positive Control: Breast carcinoma

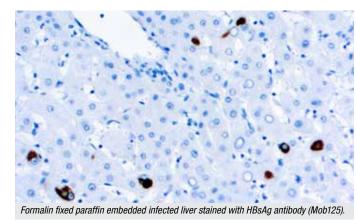
Cellular Localization: Cytoplasmic and nuclear

Specificity: This antibody is specific to constitutive (HSP73) and inducible (HSP72) form of HSP70. HSP70 is found to be associated with steroid receptors, actin, p53, polyoma T antigen, nucleotides and other known proteins. HSP70 has been shown to be involved in protective roles against thermal stress, cytotoxic drugs and other damaging conditions.

### Hepatitus B Surface Antigen, HBsAq

Clone: 3E7

Catalog No.: Mob125 Concentrated PDM079 Prediluted



**Immunogen:** Purified HBsAg subtype ayw3.

Isotype: IgG1

Positive Control: Infected liver **Cellular Localization:** Cytoplasmic

Specificity: This antibody stains the cytoplasm of antigen-positive liver cells in patients with Type B viral hepatitis. This antibody reacts with the 'a' determinant present on the HBsAg subtypes ayw1, ayw2, ayw3, ayw4, ayr, adw2, adw4 and adr. It does not react with normal tissues.

IVD only for markets outside the U.S. RUO for U.S. market.

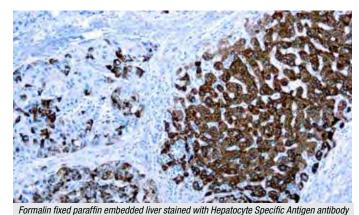
### Hepatocyte Specific Antigen (HSA/HepPar-1)

Clone: OCH1E5

Catalog No.: Mob426 Concentrated PDM162 Prediluted







Immunogen: Human liver fixed in formalin.

Isotype: IaG1

(Mob426).

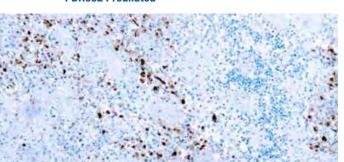
**Positive Control:** Liver

**Cellular Localization:** Cytoplasmic

Specificity: Hepatoblastoma is the most common primary tumor of the liver in children. The use of specific hepatocyte markers and also of  $\alpha$  fetoprotein or carcinoembryonic antigen are useful for the identification of normal and malignant fetal hepatocytes. This antibody recognizes an uncharacterized antigen present in both adults and fetal normal hepatocytes to produce a distinct granular cytoplasmic staining. This antibody stains majority of hepatocellular carcinomas.

### Herpes Simplex Virus Type I (HSV1)

Catalog No.: RP018 Concentrated PDR032 Prediluted



Formalin fixed paraffin embedded Infected tissue stained with HSV I antibody (RP018).

**Immunogen:** Whole rabbit corneal cells, infected with herpes simplex virus type I (strain Mac Intyre), were solubilized with detergent.

Positive Control: Infected tissue

Cellular Localization: Cytoplasmic, nuclear

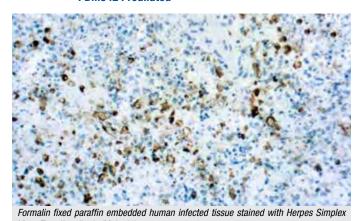
**Specificity:** This antibody reacts with HSV type I specific antigens and with antigens common to HSV type I and II virus. It reacts with all the major glycoproteins present in the viral envelope as well as with at least one core protein.

IVD only for markets outside the U.S. RUO for U.S. market.

### Herpes Simplex Virus Type II (HSV II)

Clone: DBM15.69

Catalog No.: Mob542 Concentrated PDM542 Prediluted



Visus Type II antibody (Mob542).

Immunogen: BALB/C mice were immunized with Parker strain of herpes

simplex virus type 2. **Isotype:** IgG1

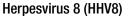
Positive Control: Infected tissue

Cellular Localization: Cytoplasmic, nuclear

Specificity: This antibody reacts with herpes simplex virus type 2. It is

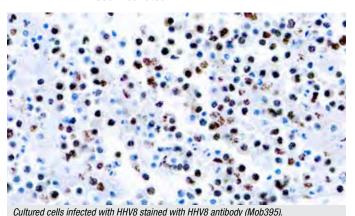
specific for the viral glycoprotein D (gD) protein.

IVD only for markets outside the U.S. RUO for U.S. market.



Clone: LN53

Catalog No.: Mob395 Concentrated PDM395 Prediluted



Immunogen: Recombinant protein corresponding to the latent nuclear

antigen-1 molecule of HHV8.

Isotype: IgG2c

**Positive Control:** Karposi sarcoma **Cellular Localization:** Nuclear

**Specificity:** This antibody stains with ORF-73 of human herpesvirus 8 (HHV8). HHV8 is the likely etiological agent of Kaposi sarcoma (KS). HHV8 encodes a latent nuclear antigen (LNA), which is the product of the viral gene ORF 73. LNA is capable of forming a complex with retinoblastoma susceptibility gene product, which may be related to its oncogenic activity.

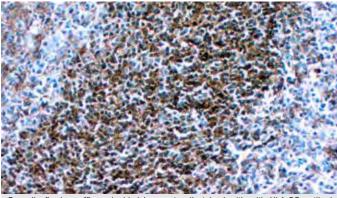
IVD only for markets outside the U.S. RUO for U.S. market.

### HLA-DR ( $\beta$ chain of DP, DQ & DR)

Clone: CR3/43

Catalog No.: Mob069R Concentrated





Formalin fixed paraffin embedded human tonsil stained with with HLA-DR antibody (Mob069R).

Immunogen: Tonsil cells Isotype: IgG1, kappa Positive Control: Tonsil

**Cellular Localization:** Cell membrane

**Specificity:** This antibody reacts with the  $\beta$  chain of all products of the gene sub regions DP, DQ, and DR. It stains B cells, interdigitating reticulum cells, Langerhans cells and many macrophages. This antibody does not react with normal T cell and polymorphs but stains activated T cells.

RUO for all markets.

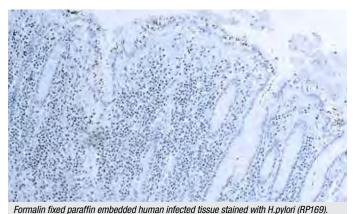




IVD

### H. pylori

Catalog No.: RP169 Concentrated PDR169 Prediluted

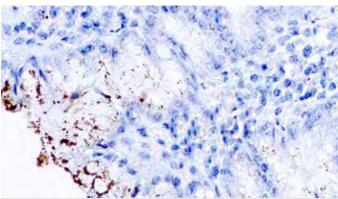


Immunogen: Total Lysate of H.Pylori Positive Control: Infected stomach Cellular Localization: Cytoplasmic

**Specificity:** This antibody reacts with the 54 kDa (flagellin) of H. pylori. The antibody stains the bacteria present on the surface of the epithelium or in the cytoplasm of the epithelial cells. H. pylori is known to cause peptic ulcer and chronic gastritis in humans.

H. pylori Clone: DBM15.75

Catalog No.: Mob559 Concentrated PDM559 Prediluted



Formalin fixed paraffin embedded human stomach infected with H.pylori and stained with H.pylori antibody (PDM559).

Immunogen: Helicobacter pylori

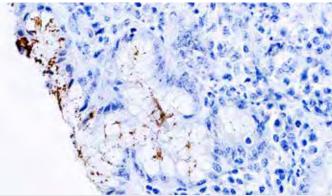
Isotype: IgG1

**Positive Control:** Infected stomach **Cellular Localization:** Cytoplasmic

**Specificity:** This antibody reacts with the 54 kDa (flagellin) of H. pylori. The antibody stains the bacteria present on the surface of the epithelium or in the cytoplasm of the epithelial cells. H. pylori is known to cause peptic ulcer and chronic gastritis in humans.

H. pylori (Helicobacter pylori)

Catalog No.: RP016 Concentrated PDR053 Prediluted



Formalin fixed paraffin embedded human stomach infected with H. pylori and stained with H. pylori antibody (RP016).

Immunogen: Total lysate of H. pylori.

Positive Control: Infected stomach

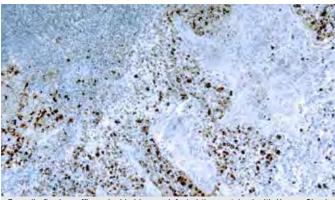
Cellular Localization: Cytoplasmic

**Specificity:** This antibody reacts with the whole H. pylori. The antibody stains the bacteria present on the surface of the epithelium or in the cytoplasm of the epithelial cells. H. pylori is known to cause peptic ulcer and chronic gastritis in humans.

### **HSV Cocktail**

(Rabbit anti-HSV I + Mouse anti-HSV II)

Catalog No.: PDRM001 Prediluted



Formalin fixed paraffin embedded human infected tissue stained with Herpes Simplex Visus Type I and Type II antibody (PDRM001).

Immunogen: Whole rabbit corneal cells, infected with herpes simplex virus type I (strain Mac Intyre) and BALB/C mice immunized with Parker strain of herpes simplex virus type 2.

Positive Control: Infected tissue

 $\textbf{Cellular Localization:} \ \textbf{Cytoplasmic, nuclear}$ 

Specificity: This antibody reacts with HSV type I and II specific antigens and with antigens common to HSV type I and II virus. It reacts with all the major glycoproteins present in the viral envelope as well as with at least one core protein.

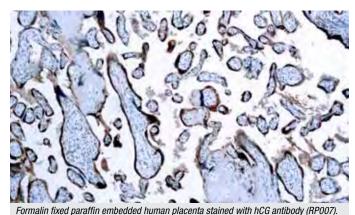
IVD only for markets outside the U.S. RUO for U.S. market.



### Human Chorionic Gonadotropin (hCG)

Catalog No.: RP007 Concentrated

**PDR030 Prediluted** 



**Immunogen:**  $\beta$  chain of human chorionic gonadotropin.

Positive Control: Placenta Cellular Localization: Cytoplasmic

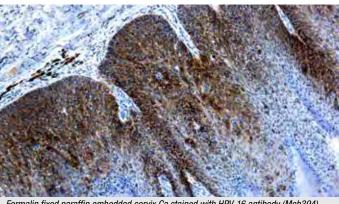
**Specificity:** This antibody reacts with hCG. It stains strongly with the human

placenta and placental trophoblasts.

### **Human Papilloma Virus Type 16 (HPV 16)**

Clone: CAMVIR-1

Catalog No.: Mob394 Concentrated PDM166 Prediluted



Formalin fixed paraffin embedded cervix Ca stained with HPV-16 antibody (Mob394).

Immunogen: BALB/C mice were immunized with recombinant HPV-16 L1 protein.

Isotype: IgG2a

Positive Control: HPV type 16 infected cervix

Cellular Localization: Nuclear

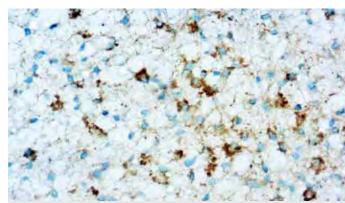
Specificity: This antibody stains with HPV type 16. L1 protein is a major capsid protein of HPV type 16. HPV 6 and 11 have been associated with relatively benign diseases such as genital warts but type 16 and 18 are strongly associated with cervical, vaginal and vulvar malignancies.

IVD only for markets outside the U.S. RUO for U.S. market.



Clone: Smab-1

Catalog No.: Mob582R Concentrated PDM582R Prediluted



Formalin fixed paraffin embedded Anaplastic Oligodendrogliom stained with IDH1(Mob580).

Immunogen: KLH-conjugated linear peptide corresponding to human

Isocitrate Dehydrogenase 1 (IDH1)-R132S. Positive Control: Human Glioma tissue

Isotype: IgG1κ

Cellular localization: Cytoplasmic/nuclear

Specificity: Isocitrate dehydrogenase 1 (IDH1) is a 46 kDa NADPdependent enzyme, which catalyzes the decarboxylation of isocitrate into  $\alpha$ -ketoglutarate. IDH1 may also play a role in the prevention of oxidative damage, and the shuttling of proteins to peroxisomes. It is widely reported that mutations in IDH1 result in multiple forms of gliomas. The Arginine to Serine substitution at amino acid 132 is seen in gliomas, abolishes magnesium binding and alters enzyme activity so that isocitrate is no longer converted to alpha-ketoglutarate but instead alpha-ketoglutarate is converted to R(-)-2-hydroxyglutarate..

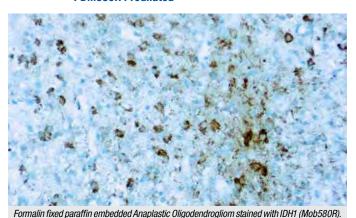
RUO for all markets.

# Diagnostic BioSystems' **Primary Antibodies**

come in prediluted and concentrated formats, optimized to provide high quality immunohistochemistry stains.

IDH1 Clone: Hmab-1

Catalog No.: Mob580R Concentrated PDM580R Prediluted



**Immunogen:** KLH-conjugated linear peptide corresponding to human Isocitrate Dehydrogenase 1 (IDH1).

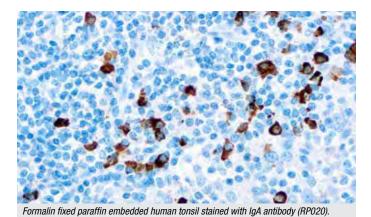
Isotype: IgG1, kappa

**Cellular localization :** Cytoplasm

**Specificity:** Monoclonal Anti-IDH1 (R132H) recognizes only the R132H mutation of human IDH1 (R132H) and does not cross react with other mutations. The most frequent known mutation (>90%) is the alteration of arginine to histidine (R132H).6. Hence, antibodies that recognize the IDH1R132H mutation can be useful for the diagnosis of mutation-bearing tumors like gliomas.

RUO for all markets.

IgA
Catalog No.: RP020 Concentrated
PDR017 Prediluted



Immunogen: IgA isolated from a pool of normal human sera.

Positive Control: Tonsil

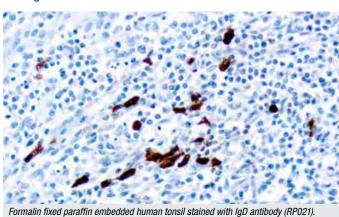
**Cellular Localization:** Cytoplasmic

Specificity: This antibody reacts with  $\alpha\text{-chains}$  of human IgA. This antibody

has been adsorbed to a very high level of specificity.



Catalog No.: RP021 Concentrated



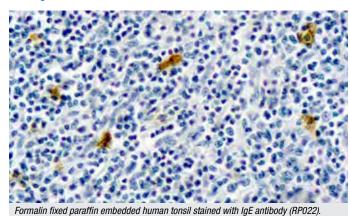
**Immunogen:** IgD isolated from a pool of normal human plasma.

Positive Control: Tonsil

**Cellular Localization:** Cytoplasmic

**Specificity:** This antibody reacts with the  $\delta$  chain of human lgD. Traces of contaminating antibodies have been removed by solid phase adsorption. Only the lgD arch appeared in crossed immunoelectrophoresis.





Immunogen: IgE isolated from the serum of a patient with IgE-myeloma.

Positive Control: Tonsil

**Cellular Localization:** Cytoplasmic

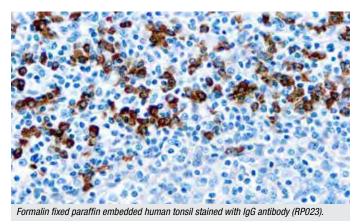
**Specificity:** This antibody reacts with the  $\epsilon$  chain of human IgE. Traces of contaminating antibodies have been removed by solid phase adsorption. Only the IgE arch appeared in crossed immunoelectrophoresis.



lqG



Catalog No.: RP023 Concentrated **PDR018 Prediluted** 



**Immunogen:** IgG isolated from a pool of normal human sera.

Positive Control: Tonsil

**Cellular Localization:** Cytoplasmic

**Specificity:** This antibody reacts with  $\gamma$ -chains of human lgG. Nonspecific

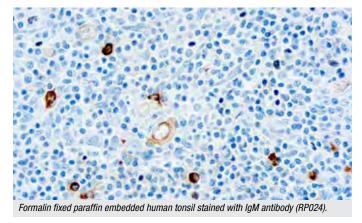
antibodies have been removed by solid-phase adsorption.

**IqM** 





Catalog No.: RP024 Concentrated PDR019 Prediluted



Immunogen: IgM isolated from human serum of a patient.

Positive Control: Tonsil

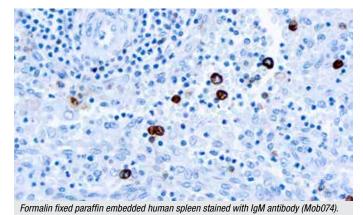
**Cellular Localization:** Cytoplasmic

Specificity: This antibody reacts with the mu-chains of human IgM. Nonspecific antibodies have been removed by solid-phase adsorption.

IgM (R1/69)

Clone: R1/69





Immunogen: Human lymphoid cells.

Isotype: IgG1, kappa Positive Control: Tonsil

**Cellular Localization:** Cytoplasm

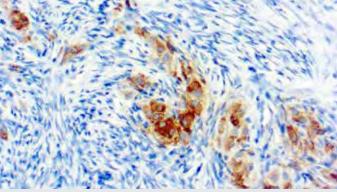
Specificity: This antibody reacts with the heavy chain present in all types of human IgM. It stains B cell follicles in human lymphoid tissues. In lymphoid tissues, IgM containing plasma cells stain strongly but immune complexes are usually undetectable.

Inhibin  $\alpha$ Clone: R1





Catalog No.: Mob435 Concentrated PDM178 Prediluted



Formalin fixed paraffin embedded human ovary stained with Inhibin  $\alpha$  antibody (Mob435).

Immunogen: Synthetic peptide corresponding to the 1-32 amino terminal peptide of the  $\alpha$  subunit of human inhibin.

Isotype: IgG2a

Positive Control: Ovary

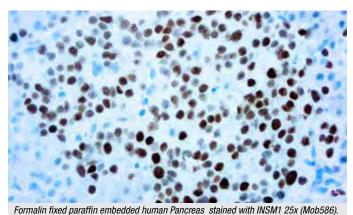
**Cellular Localization:** Cytoplasmic

**Specificity:** Inhibin is a dimeric glycoprotein hormone from the TGF- $\beta$  family made of  $\alpha$  and  $\beta$  subunits. This antibody recognizes the 32kDa  $\alpha$  subunit of human inhibin. Inhibin  $\alpha$  is expressed in a wide variety of human tissues, such as brain, prostate, adrenal, granulose cells of ovary, sertoli cells of testis and in fetoplacental unit.

### INSM1 Clone: A-8

Catalog No.: Mob586 Concentrated

**PDM586 Prediluted** 



**Immunogen:** Amino acid 81-125 at the N-terminus of human INSM1.

Isotype: IgG1, kappa

Positive Control: Neuroendocrine tumor **Cellular Localization:** Cytoplasmic

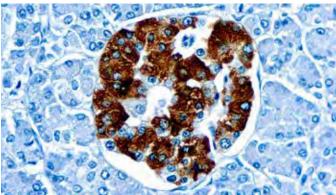
Specificity: This antibody is raised against amino acids 81-125 mapping

near the N-terminus of INSM1 of human origin.

## Insulin

Clone: K36aC10

Catalog No.: Mob234 Concentrated PDM270 Prediluted



Formalin fixed paraffin embedded human pancreas stained with Insulin antibody

Immunogen: Human insulin.

Isotype: IqG1

Positive Control: Pancreas **Cellular Localization:** Cytoplasmic

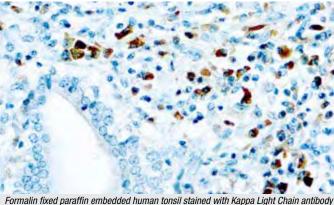
Specificity: This antibody recognizes purified insulin from the pancreas of

human, as well as proinsulin from human.

### **Kappa Light Chain**

Clone: KP-53

Catalog No.: Mob544 Concentrated **PDM055 Prediluted** 



Immunogen: BALB/C mice were immunized with purified Bence Jones

kappa light chain protein.

Isotype: IgG2b

(Mob544).

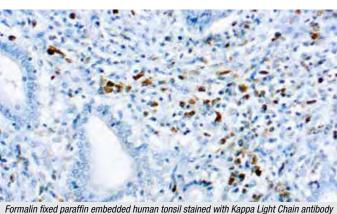
Positive Control: Tonsil

**Cellular Localization:** Cytoplasm

Specificity: This antibody reacts with B cell follicles in human lymphoid tissues. The mantle zones give a mosaic pattern, while the germinal centers show a coarse meshwork pattern of staining. This antibody stains free as well as bound kappa light chains. This antibody does not react with human lambda light chain.

### **Kappa Light Chain**

Catalog No.: RP025 Concentrated **PDR015 Prediluted** 



Immunogen: Kappa light chains isolated from pooled urine of patients with Bence Jones proteinuria.

**Positive Control: Tonsil** 

(RP025).

**Cellular Localization:** Cytoplasmic

Specificity: This antibody reacts with free as well as bound kappa light chains. Contaminating antibodies have been removed by solid phase adsorption.





Ki-67

Catalog No.: RP026 Concentrated **PDR048 Prediluted** 

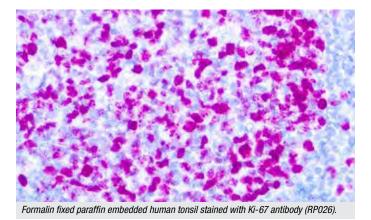


Ku(p70) Clone: H-6









Immunogen: Synthetic peptide from 62 base pair region of the human

Ki-67 antigen.

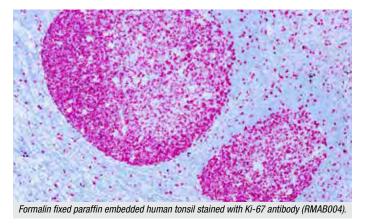
Positive Control: Tonsil Cellular Localization: Nuclear

Specificity: This antibody reacts with a nuclear antigen present in proliferating human cells. It can be used to evaluate the Ki-67 labeling index

in various tumors.

Ki-67 Clone: SP6

Catalog No.: RMAB004 Concentrated **RMPD004 Prediluted** 



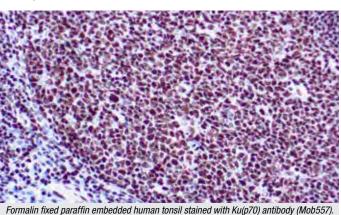
Immunogen: A synthetic peptide from C-terminus of human Ki-67.

Isotype: IgG

Positive Control: Tonsil Cellular Localization: Nuclear

Specificity: Ki-67 is a nuclear protein, which is expressed in proliferating cells. Ki-67 is preferentially expressed during late G1-, S-, M-, and G2phases of the cell cycle, while cells in the GO (quiescent) phase are negative

for this protein.



Immunogen: Ku-(p70) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 583-608 at the C-terminus of KU-70 of human origin.

Isotype: IaG1

Positive Control: Tonsil Cellular Localization: Nuclear

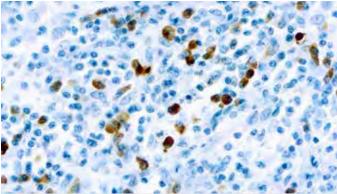
**Specificity:** This antibody reacts with a 70 kD protein known as Ku (p70). The Ku protein is localized in the nucleus and is composed of subunits referred to as Ku-70 (or p70) and Ku-86 or (p86). Both subunits of the Ku protein have been cloned, and a number of functions have been proposed for Ku, including cell signaling, DNA replication and transcriptional activation. Ku is involved in Pol II-directed transcription by virtue of its DNA binding activity, serving as the regulatory component of the DNA-associated protein kinase that phosphorylates Pol II and transcription factor Sp.

### Lambda Light Chain





Catalog No.: RP027 Concentrated **PDR016 Prediluted** 



Formalin fixed paraffin embedded human tonsil stained with Lambda Light Chain antibody (RP027).

Immunogen: Lambda light chains isolated from pooled urine of patients with Bence Jones proteinuria.

Positive Control: Tonsil

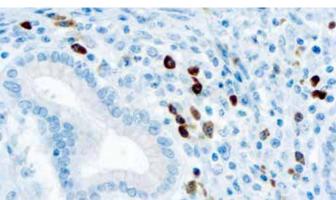
**Cellular Localization:** Cytoplasmic

Specificity: This antibody reacts with free as well as bound lambda light chains. Contaminating antibodies have been removed by solid phase adsorption.

### Lambda Light Chain

Clone: N10/2

Catalog No.: Mob077 Concentrated PDM056 Prediluted



Formalin fixed paraffin embedded human tonsil stained with Lambda Light Chain antibody (Mob077).

Immunogen: BALB/C mice were immunized with purified IgG from

human serum. Isotype: IgG1, kappa Positive Control: Tonsil

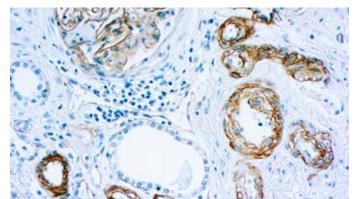
**Cellular Localization:** Cytoplasm

Specificity: This antibody does not show any cross-reactivity with kappa light chain. It stains B cell follicles in human lymphoid tissues. The mantle zone shows a mosaic pattern of labeling while the germinal centers show a

coarse meshwork pattern of staining.

### Laminin Clone: 4C7

Catalog No.: Mob202 Concentrated PDM568 Prediluted



Formalin fixed paraffin embedded renal carcinoma stained with Laminin antibody

Immunogen: The A chain of human laminin.

Isotype: IgG2a, kappa Positive Control: Skin

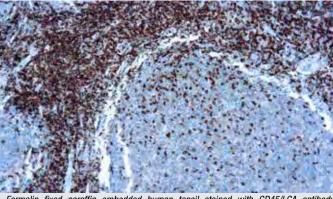
Cellular Localization: Basement membrane

Specificity: This antibody reacts with the terminal globular domain of the A chain. The staining with this antibody is sensitive to fixation of paraffin tissues and use of proteolytic enzymatic treatment.

### Leukocyte Common Antigen (LCA)/CD45

Clone: PD7/26 + 2B11

Catalog No.: Mob040 Concentrated **PDM009 Prediluted** 



Formalin fixed paraffin embedded human tonsil stained with CD45/LCA antibody (PDM009).

Immunogen: BALB/C mice were immunized with human peripheral blood lymphocytes to raise clone PD7/26 and with isolated neoplastic cells from T cell lymphoma to raise clone 2B11.

Isotype: Both clones, IgG1, kappa

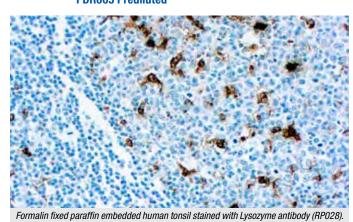
**Positive Control: Tonsil** 

**Cellular Localization:** Cell membrane

Specificity: The human leukocyte common antigen is a family of five or more high molecular weight glycoproteins of MW 180, 190, 205 and 220 kDa, present on the surface of the majority of human leukocytes. This antibody labels lymphoid cells. It labels neoplastic B and T cells in non-Hodgkin lymphoma and in leukemias of B and T cell types.

### Lysozyme/Muramidase

Catalog No.: RP028 Concentrated PDR005 Prediluted



Immunogen: Lysozyme isolated from urine of patients with monocytic leukemia.

Positive Control: Tonsil

**Cellular Localization:** Cytoplasmic

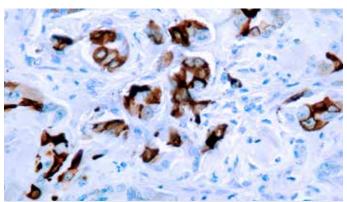
Specificity: This antibody reacts with lysozyme. It stains granulocytes, monocytes and macrophages in human tonsil, skin and colon. This antibody does not cross-react with any other cell types.



### Mammaglobin-A

Clone: 304-1A5

Catalog No.: PDM544 Prediluted



Formalin fixed paraffin embedded human breast carcinoma stained with Mammaglobin-A (PDM:544).

**Immunogen:** Purified mammaglobin recombinant protein, containing amino acids 15-93.

Isotype: IgG1, kappa
Positive Control: Breast

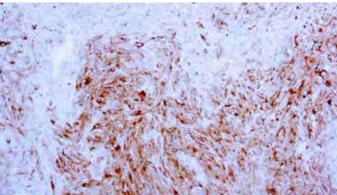
**Cellular Localization:** Cytoplasmic

**Specificity:** Mammaglobin, a 93-amino acid glycoprotein, is encoded by a gene first identified in a study directed at the isolation of novel human breast cancer-associated genes (1). Mammaglobin expression is mostly, although not exclusively, confined to breast tissue, and anti-mammoglobin is a useful aid for the classification of carcinomas of breast origin.

### MART-1

Clone: A103

Catalog No.: Mob277 Concentrated PDM153 Prediluted



Formalin fixed paraffin embedded human melanoma stained with MART-1 antibody (Mob277).

Immunogen: BALB/C mice were injected with recombinant MART-1 protein.

Isotype: IgG1

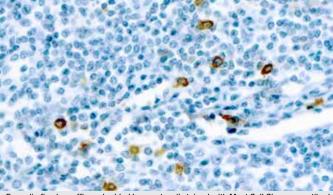
Positive Control: Melanoma
Cellular localization: Cytoplasmic

**Specificity:** This antibody is specific to a protein of 20 kDa known as MART-1 (melanoma antigen recognized by T cells-1) or Melan-A. This antibody does not cross-react with MAGE-1or tyrosinase. MART-1 is a newly identified melanocyte differentiation antigen recognized by autologous cytotoxic T lymphocytes. This antibody stains melanomas and other tumors showing melanocytic differentiation.

### Mast Cell Chymase

Clone: CC1

Catalog No.: Mob346 Concentrated PDM159 Prediluted



Formalin fixed paraffin embedded human tonsil stained with Mast Cell Chymase antibody (Moh346)

**Immunogen:** BALB/C mice were injected with a purified human skin chymase.

Isotype: IgG1

Positive Control: Tonsil

**Cellular Localization:** Cytoplasmic

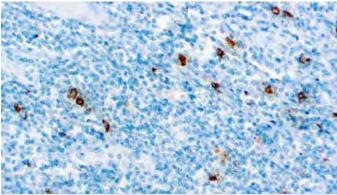
**Specificity:** This antibody reacts with mast cells distributed in skin, synovium, lung, and heart. Mast cells contain a number of preformed chemicals mediators such as histamine, chymase, carboxypeptidase, and proteolytic tryptase. Human mast cell chymase is considered to be an important marker of mast cells and is an important mediator of inflammation.

### Mast Cell Tryptase

Clone: AA1

Catalog No.: Mob347 Concentrated

PDM160 Prediluted



Formalin fixed paraffin embedded human tonsil stained with Mast Cell Tryptase antibody (Mob347).

 $\label{lem:munogen:balb/C} \textbf{Immunogen:} \ \textbf{BALB/C} \ \textbf{mice} \ \textbf{were} \ \textbf{injected} \ \textbf{with} \ \textbf{a} \ \textbf{purified} \ \textbf{human} \ \textbf{lung} \ \textbf{tryptase}.$ 

**Isotype:** IgG1

Positive Control: Tonsil

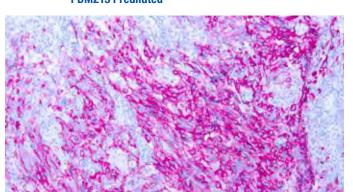
**Cellular Localization:** Cytoplasmic

**Specificity:** This antibody reacts with mast cells distributed in skin, synovium, lung, and heart. This antibody does not bind with any other cell type. Mast cells contain a number of preformed chemicals mediators such as histamine, chymase, carboxypeptidase, and proteolytic tryptase. Human mast cell tryptase is considered to be an important marker of mast cell activation and is an important mediator of inflammation.



## Melanoma Clone: PNL2

Catalog No.: Mob421 Concentrated PDM213 Prediluted



Formalin fixed paraffin embedded human melanoma stained with Melanoma antibody (Mob421).

Immunogen: Synthetic peptide.

Isotype: IgG1

Positive Control: Melanoma

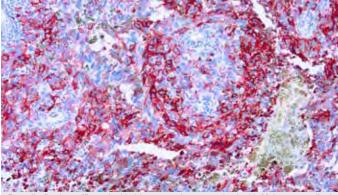
Cellular Localization: Cytoplasmic, membrane

**Specificity:** This antibody labels melanocytes and is a useful tool for the identification of melanomas and clear cell sarcomas. Anti-Melanoma, PNL2, seems to be a melanocyte antibody of autoimmune origin as it does not react with the non-melanocytic peptide antigen used for immunization.

### Melanoma (HMB45)

Clone: HMB45

Catalog No.: Mob079 Concentrated PDM011 Prediluted



Formalin fixed paraffin embedded human melanoma stained with Melanoma antibody (Mob079).

**Immunogen:** BALB/C mice were injected with extract of pigmented melanoma metastases from lymph nodes.

Isotype: IgG1, kappa
Positive Control: Melanoma
Cellular Localization: Cytoplasm

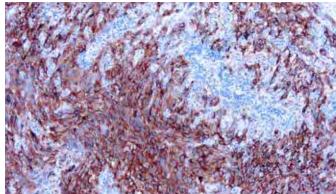
**Specificity:** This antibody reacts with a neuraminidase sensitive oligosaccharide side chain of a glycoconjugate present in immature melanosomes. It reacts with junctional and blue nevus cells. Non-melanocytic cells are negative.

### Melanoma Cocktail

(HMB45 + Tyrosinase + MART-1)

Clone: HMB45 + T311 + A103

Catalog No.: Mob428 Concentrated PDM146 Prediluted



Formalin fixed paraffin embedded human melanoma stained with Melanoma Cocktail

**Immunogen:** Pigmented melanoma metastases from lymph nodes (HMB45) Recombinant human MART-1 protein (A103). Recombinant tyrosinase protein T311.

Isotype: HMB45 and A103, IgG1; T311, IgG2a

Positive Control: Metastatic melanoma in lymph node

**Cellular Localization:** Cytoplasmic

IVD

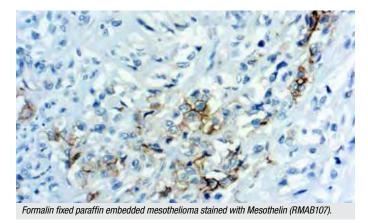
Specificity: The HMB45 clone reacts with a neuraminidase-sensitive oligosaccharide side chain of a glycoconjugate present in immature melanosomes. The HMB45-reactive antigen is present in cutaneous melanocytes, prenatal and infantile retinal pigment epithelium and melanoma cells and is thought to be oncofetal in nature. This antibody has been shown to label the majority of melanomas. Clone A103 recognizes a protein of 20 kDa, identified as MART-1 (melanoma antigen recognized by T cells-1) or Melan-A. Melan-A is a useful addition to melanoma panels as it is apparently specific for melanocytic lesions. Studies have also shown that MART-1 is more sensitive than HMB45 when labeling metastatic melanomas. Tyrosinase is a key enzyme involved in the initial stages of melanin biosynthesis. Studies have shown tyrosinase to be a more sensitive marker when compared to HMB45 and MART-1. It has been shown to label a higher percentage of desmoplastic melanomas than HMB45. The combination of HMB45, MART-1 and tyrosinase make this triple antibody cocktail a first-order pan melanoma screener.



### Mesothelin Clone: YP158

Catalog No.: RMAB107 Concentrated **RMPD107 Prediluted** 





**Immunogen:** Synthetic peptide corresponding to C-terminus of human

mesothelin protein.

Isotype: IgG

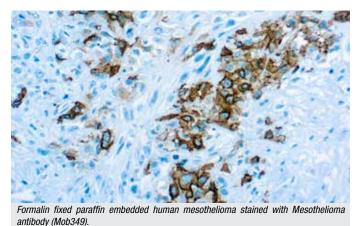
Positive Control: Mesothelioma Cellular Localization: Cell membrane

Specificity: Mesothelin is a glycocylphosphotidylianositol-linked cell-surface glycoprotein, which is present on the surface of normal mesothelium and is overexpressed in many patients with epithelial ovarian cancer and malignant mesotheliomas.

### Mesothelioma

Clone: HBME-1

Catalog No.: Mob349 Concentrated PDM134 Prediluted



Immunogen: BALB/C mice were injected with suspension of human mesothelioma cells from patients with malignant epithelial mesothelioma.

Positive Control: Mesothelioma Cellular Localization: Cell membrane

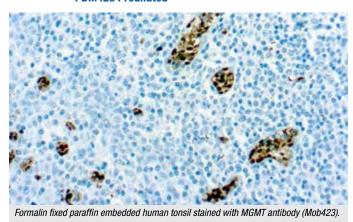
Specificity: This antibody reacts with an unknown antigen on microvilli of mesothelioma cells. It stains normal mesothelial cells as well as epithelial mesotheliomas in a thick membrane pattern due to abundant lung microvilli on the surface of these cells.

### MGMT

(O(6)-Methylguanine-DNA-Methyltransferase)

Clone: MT3.1

Catalog No.: Mob423 Concentrated PDM423 Prediluted



Immunogen: Recombinant human MGMT protein.

Isotype: IgG1

Positive Control: Tonsil

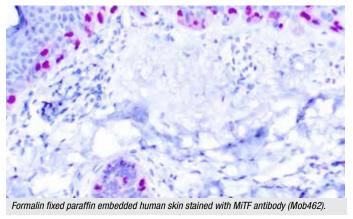
Cellular Localization: Nuclear and cytoplasmic

Specificity: 0(6)-methylguanine-DNA-methyltransferase (MGMT) is a 22 kDa human DNA repair protein that removes O(6)-alkylguanine DNA adducts. MGMT acts as a suicide acceptor protein repairing the DNA by accepting alkyl groups and consequently inactivating itself. This antibody stains all mantle zone lymphocytes and 50% of germinal center lymphocytes. Basaloid epithelial cells of tonsil squamous mucosa are also stained positive with this antibody.

### Microphthalmia Transcription Factor (MiTF) Clone: D5



Catalog No.: Mob462 Concentrated **PDM168 Prediluted** 



Immunogen: BALB/C mice were injected with N-terminal fragment of human Mi protein.

Isotype: IaG1

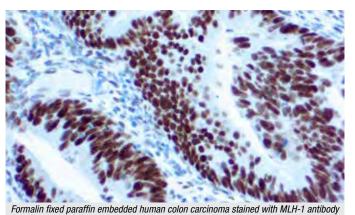
Positive Control: Melanoma **Cellular Localization: Nuclear** 

**Specificity:** This antibody reacts with a 52-56 kDa protein known as microphthalmia (Mi). This antibody reacts with both melanocytic and nonmelanocytic isoforms of Mi. Mi is a basic helix-loop-helix-leucine zipper (b-HLH-ZIP) transcription factor implicated in pigmentation, mast cells and bone development. There are two known isoforms of Mi differing by 66 amino acids at the amino terminus.

### MLH-1 (Mismatch Repair Protein)

Clone: G168-15

Catalog No.: Mob430 Concentrated PDM148 Prediluted



(Mob430).

Immunogen: Full length recombinant MLH.

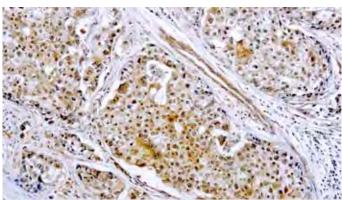
Isotype: IgG1

Positive Control: Tonsil, colon carcinoma

Cellular Localization: Nuclear

Specificity: The G168-15 antibody recognizes human and mouse MLH1 (80-85kDa). The repair of mismatch DNA is essential to maintaining the integrity of genetic information over time. An alteration of microsatellite repeats is the result of slippage owing to strand misalignment during DNA replication and is referred to as microsatellite instability (MSI). These defects in DNA repair pathways have been related to human carcinogenesis. The importance of mismatch repair genes became apparent with the identification of the genetic basis for hereditary nonpolyposis colon cancer (HNPC). MSH-2 is involved in the initial cognition of mismatch nucleotides during the replication mismatch repair process. It is thought that after MSH2 binds to a mismatched DNA duplex it is joined by a heterodimer of MLH1 and PMSH, which together help facilitate the later steps in mismatch repair.

# MMP-9 Catalog No.: RP066 Concentrated



Formalin fixed paraffin embedded human breast carcinoma stained with MMP-9 antibody (RP066).

Immunogen: A synthetic peptide from the middle region of human MMP-9.

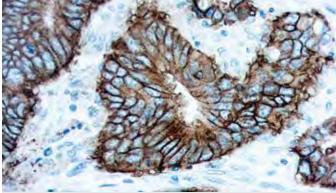
**Positive Control:** Breast carcinoma **Cellular Localization:** Cytoplasmic

**Specificity:** This antibody reacts with a 92 kDa proform and 86 kDa active form of MMP-9. MMPs are proteolytic enzymes capable of degrading connective tissue components. MMPs play a crucial role in tumor cell invasion and metastasis. *IVD only for markets outside the U.S. RUO for U.S. market.* 

### MOC-31

Clone: MOC-31

Catalog No.: Mob546 Concentrated PDM546 Prediluted



Formalin fixed paraffin embedded human colon carcinoma stained with MOC-31 (Mob546).

Immunogen: Epithelial antigen, EPG-2

Positive Control: Colon and Breast (Normal and Carcinoma)

Isotype: IgG1

**Cell Localization:** Cytoplasmic

Specificity: MOC-31 antibody recognizes an epithelial-associated, glycoprotein located on the cell membrane surface and in the cytoplasm of virtually all epithelial cells. It is not present in most squamous epithelia, hepatocytes, renal proximal tubular cells, gastric parietal cells and myoepithelial cells. MOC-31 may be used in a panel of antibodies as a negative marker for mesothelioma, or lung adenocarcinoma. Studies have shown that MOC-31 is useful in differentiating tumors of unknown origin in liver cancers and distinguishing cholangiocarcinoma from hepatocellular carcinomas.

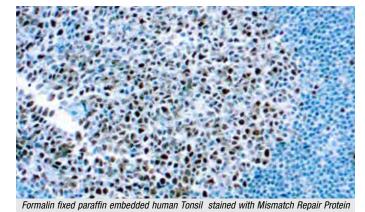
#### MSH<sub>2</sub>

Clone: DBM15.82

Catalog No.: Mob585 Concentrated PDM585 Prediluted







Immunogen: BALB/C mice injected with recombinant human MSH2 protein.

Isotype: IgG1, kappa Positive Control: Tonsil Cellular Localization: Nuclear

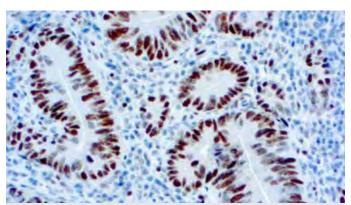
**Specificity:** This antibody reacts with a 102 kDa protein known as MSH2 (mismatch repair protein 2). MSH2 protein is involved in the initial recognition of mismatched nucleotides during the post replication mismatch repair process. Loss of MSH2 function leads to the accumulation of replication errors, which in turn may be responsible for the multiple mutations required for multistage carcinogenesis.

### MSH6 (Mismatch Repair Protein)

Clone: 44

Catalog No.: Mob429 Concentrated PDM147 Prediluted





Formalin fixed paraffin embedded human colon carcinoma stained with MSH6 antibody (PDM147).

Immunogen: Human MSH6.

Isotype: IgG1

Positive Control: Tonsil, colon carcinoma

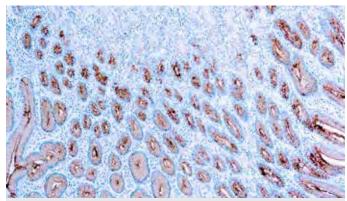
Cellular Localization: Nuclear

Specificity: MSH6 is a heterodimer of MSH2 and binds to DNA containing G/T mismatches. The MSH2-MSH6 complex recognizes a single-base mispair insertion/deletion loop. An alteration of microsatellite repeats is the result of slippage owing to strand misalignment during DNA replication and is referred to as microsatellite instability (MSI). These defects in DNA repair pathways have been related to human carcinogenesis. Studies have shown the mutations of MLH-1, MSH2 and MSH6 genes contribute to the development of sporadic colorectal carcinoma. The repair of mismatch DNA is essential to maintaining the integrity of genetic information over time.

### Mucin 5AC/Gastric Mucin

Clone: 45M1

Catalog No.: Mob357 Concentrated PDM163 Prediluted



Formalin fixed paraffin embedded human stomach stained with Mucin 5AC antibody (Mob357).

**Immunogen:** BALB/C mice were injected with M1 mucin preparation from the fluid of an ovarian mucinous cyst belonging to an O Le (a-b) patient.

Isotype: IgG1, kappa
Positive Control: Stomach

Cellular Localization: Cytoplasmic, cell surface

Specificity: This antibody reacts with a 1000 kDa protein and recognizes the peptide core of gastric mucin M1. Mucins are high molecular weight glycoproteins with 80% carbohydrates and 20% core protein. Gastric mucin M1 antigen is found in columnar mucus cells of surface gastric epithelium and in goblet cells of the fetal and precancerous colon but not in normal colon. Resurgence of gastric mucin during colonic carcinogenesis is suggestive of either re-expression of the peptide core of gastric mucin in the adult colon or changes in the glycosylation pattern of mucin, which expose the hidden M1 antigen.

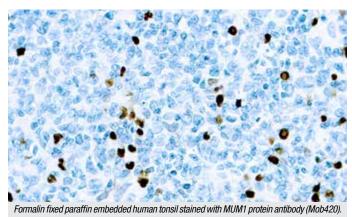
## Diagnostic BioSystems

is committed to enhancing immunohistochemistry test results at an affordable cost to support pathologists in making increasingly difficult diagnostic decisions. Our primary antibodies are well suited for both single-step and two-step polymer systems.



### MUM1 Protein Clone: MUM1P





**Immunogen:** Recombinant GST-MUM1 protein.

Isotype: IgG1

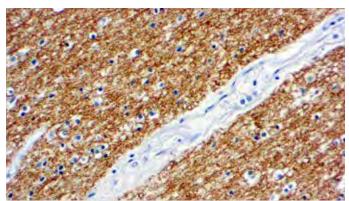
Positive Control: Tonsil

**Cellular Localization:** Nuclear and cytoplasmic

Specificity: Multiple myeloma oncogene-1 (MUM1) is a 50kDa protein encoded by the MUM1 gene. This antibody stains MUM1 protein, which is expressed in a subset of B cells in the light zone of the germinal center, plasma cells, activated T cells and a wide spectrum of related hematolymphoid neoplasms. This antibody is useful in the sub classification of lymphoid malignancies.

## Myelin Basic Protein (MBP)

Catalog No.: RP052 Concentrated



Formalin fixed paraffin embedded human medula stained with Myelin Basic Protein

Immunogen: Human myelin basic protein isolated from normal human brain.

Positive Control: Brain

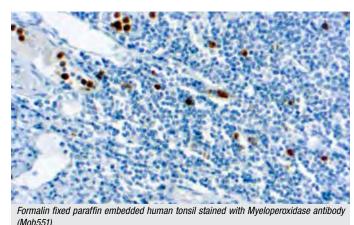
**Cellular Localization:** Cytoplasmic

Specificity: This antibody reacts with human myelin basic protein and oligodendrocytes of white matter in brain and spinal cord. Grey matter stains weakly. This antibody stains peripheral nerves also.

### Myeloperoxidase (MPO)

Clone: 59A5

Catalog No.: Mob551 Concentrated PDM551 Prediluted



**Immunogen:** Recombinant protein from exon 7 of the human

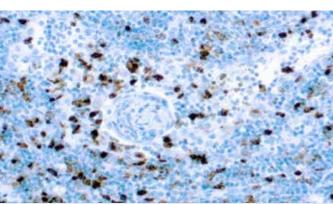
myeloperoxidase. Isotype: IgG2b, kappa Positive Control: Tonsil

**Cellular Localization:** Cytoplasmic

Specificity: Myeloperoxidase metabolizes most of the hydrogen peroxide generated by activated phagocytes. This antibody stains strongly with the cytoplasm of myeloid cells. The antibody detects myeloperoxidase found in myeloid cells of acute myeloid leukemia. The myeloperoxidase gene has been localized to chromosome 17.

### Myeloperoxidase (MPO)

Catalog No.: RP053 Concentrated **PDR049 Prediluted** 



Formalin fixed paraffin embedded human lymphoma stained with Myeloperoxidase antibody (RP053).

Immunogen: Myeloperoxidase isolated from human granulocytes.

Positive Control: Tonsil

**Cellular Localization:** Cytoplasmic

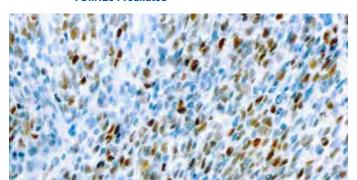
Specificity: This antibody reacts with human myeloperoxidase. It stains granules of neutrophils, granulocytes in spleen, bone marrow, tonsil and blood smears.



### MyoD1

Clone: 5.2F

Catalog No.: Mob278 Concentrated PDM120 Prediluted



Formalin fixed paraffin embedded rhabdomyosarcoma stained with MyoD1 antibody (Mob278).

**Immunogen:** BALB/C mice were injected with a recombinant mouse MyoD1 protein.

Isotype: IgG2a

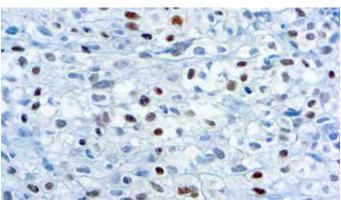
Positive Control: Rhabdomyosarcoma

Cellular Localization: Nuclear

**Specificity:** This antibody is specific to a 45 kDa protein, which is identified as MyoD1. This antibody is specific to an epitope of amino acid 3-56 in the N-terminus of mouse MyoD1. This antibody does not react with myogenin, Myf5 or Myf6. MyoD1 stains the nuclei of myoblasts in developing muscle tissues. MyoD1 is not detected in normal adult tissue but is expressed strongly in the tumor cell nuclei of rhabdomyosarcomas.

### Myogenin Clone: F5D

Catalog No.: Mob322 Concentrated PDM158 Prediluted



Formalin fixed paraffin embedded human rhabdomyoscarcoma stained with Myogenin (PDM158).

**Immunogen:** BALB/C mice were injected with recombinant protein containing rat myogenin amino acid 30-224.

Isotype: IgG1

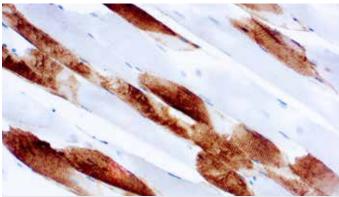
Positive Control: Rhabdomyosarcoma Cellular Localization: Nuclear

**Specificity:** This antibody is specific to 34 kDa protein known as myogenin. Myogenin is a member of family of myogenic regulatory genes which includes MyoD, myf5 and MRF4. These genes encode a set of transcription factors which are essential for muscle development. Expression of myogenin is restricted to cells of skeletal muscle origin.

### Myosin, Skeletal (Fast)

Clone: MY32

Catalog No.: Mob207 Concentrated PDM085 Prediluted



Formalin fixed paraffin embedded human skeletal muscle stained with Myosin antibody (Mob207).

Immunogen: Rabbit muscle myosin.

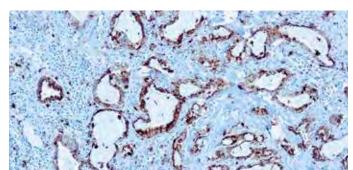
Isotype: IgG1

**Positive Control:** Skeletal muscle **Cellular Localization:** Cytoplasmic

**Specificity:** This antibody recognizes heavy chain of human skeletal myosin. It does not stain cardiac or smooth muscle myosin. This antibody stains the fast twitch (type II) isomyosin molecule.

### Napsin A Clone: KCG1.1

Catalog No.: Mob463 Concentrated PDM154 Prediluted



Formalin fixed paraffin embedded lung adenocarcinoma stained with Napsin A (PDM154).

**Immunogen:** BALB/C mice were injected with synthetic peptide from N terminus of human napsin A.

Isotype: IgG1

Positive Control: Lung adenocarcinoma

**Cellular Localization:** Napsin is found in two isoforms, A and B, with highly homologous gene sequences. Napsin A has a molecular weight of 35.0 kDa and is also known as TA02. Napsin A is an aspartic proteinase which is expressed in the lung and involved in processing surfactant protein B (SP-B). It is also expressed in the kidney. This antibody may be a useful tool as a tumor marker for primary lung adenocarcinoma. Napsin expression correlates with the differentiation grade of lung adenocarcinoma.

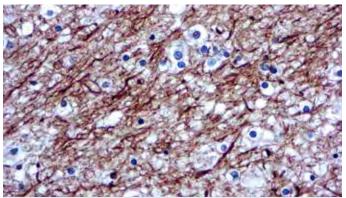




### Neurofilament

Clone: 2F11

Catalog No.: Mob080 Concentrated PDM012 Prediluted



Formalin fixed paraffin embedded human brain stained with Neurofilaments antibody (PDM012).

Immunogen: BALB/C mice were injected with purified neurofilaments from

human brain.

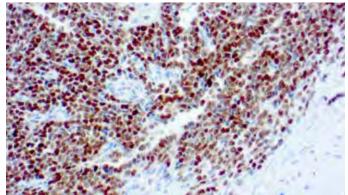
Isotype: IgG1, kappa Positive Control: Brain

**Cellular Localization:** Cytoplasmic

Specificity: This antibody reacts with 70 and 200 kDa component of the neurofilament polypeptide subunit. It stains neurons, neuronal processes and peripheral nerves. This antibody reacts with some neuroblastomas and gangliomas but not with other non-neuronal tumors.

NKX2.2 Clone: DBM15.15

Catalog No.: Mob486 Concentrated PDM199 Prediluted



Formalin fixed paraffin embedded human Ewing's sarcoma stained with NKX2.2 (Mob486).

**Immunogen:** Human full-length recombinant NKX2.2 protein.

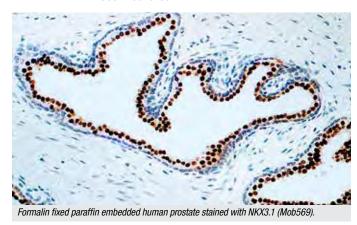
Isotype: IgG2b, kappa

Positive Control: Ewing's sarcoma **Cellular Localization: Nuclear** 

Specificity: Expression of NKX2.2 has been found in neuroendocrine tumors of the gut, making it a potential marker for the study of gastrointestinal neuroendocrine tumors. More recently, NKX2.2 protein was identified as a target of EWS-FLI-1, the fusion protein specific to Ewing sarcoma, and was shown to be differentially upregulated in Ewing sarcoma on the basis of array-based gene expression analysis. It acts as a valuable marker for Ewing sarcoma and aids in the differential diagnosis of small round cell tumors.



Catalog No.: Mob569 Concentrated **PDM569 Prediluted** 



**Immunogen:** Recombinant His fusion protein corresponding to full length human NKX3-1.

Isotype: IgG1, kappa

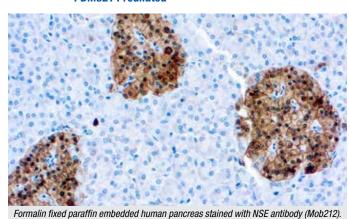
Positive Control: Prostate cancer **Cellular Localization:** Nuclear

**Specificity:** The homeodomain-containing transcription factor NKX3-1 is a putative prostate tumor suppressor that is expressed in a largely prostate-specific and androgen-regulated manner. Loss of NKX3-1 protein expression is a common finding in human prostate carcinomas and prostatic intraepithelial neoplasia.

### **NSE (Neuron Specific Enolase)**

Clone: VI-H14

Catalog No.: Mob212 Concentrated PDM321 Prediluted



**Immunogen:** BALB/C mice were injected with  $\gamma$ - $\gamma$  enolase from human brain.

Isotype: IqG1

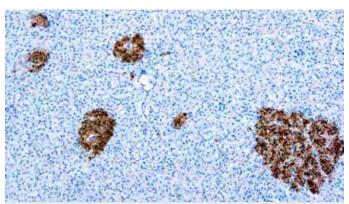
Positive Control: Pancreas **Cellular Localization:** Cytoplasmic

Specificity: This antibody is specific to  $\gamma$ - $\gamma$  enolase isozyme of 46 kDa. This antibody stains neurons, neuroendocrine cells, gangliomas, oat cell carcinomas, astrocytomas, paragangliomas, glioblastomas, pheochromocytomas, melanomas and schwannomas.



## NSE (Neuron Specific Enolase)

Catalog No.: RP054 Concentrated PDR006 Prediluted



Formalin fixed paraffin embedded human pancreas stained with NSE antibody (RP054).

**Immunogen:** Neuron specific enolase  $(\gamma-\gamma)$  isoenzyme) isolated from

bovine brain.

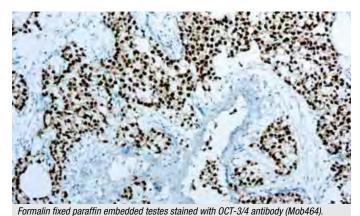
Positive Control: Pancreas

Cellular Localization: Cytoplasmic

**Specificity:** This antibody reacts with human isoenzymes of neuron specific enolase containing  $\gamma$  subunits. This antibody gives a specific staining in neurons of the brain, in islets of Langerhans in pancreas and in peripheral nerves of the skin. No staining with other tissue types has been seen.

OCT-3/4 Clone: NRG1.1

Catalog No.: Mob464 Concentrated PDM155 Prediluted



Immunogen: BALB/C mice injected with synthetic peptide of human OCT-3/4 origin.

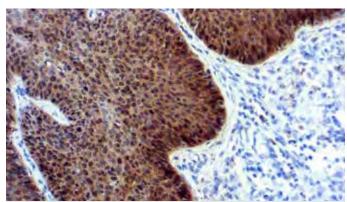
Isotype: IgG2b

Positive Control: Seminoma Cellular Localization: Nuclear

**Specificity:** OCT-3/4 (also known as POU5F1) is a transcription factor that has been recognized as fundamental in the maintenance of pluripotency in embryonic stem cells and primordial germ cells. It has been proposed as a useful marker for germ cell tumors (GCT) that exhibit features of pluripotentiality (seminoma/dysgerminoma, germinoma and embryonal carcinoma. OCT-3/4 immunostaining has been shown to be sensitive and specific for GCT, whether in primary gonadal or extragonadal sites or in metastatic lesions.

p16 Clone: JC2

Catalog No.: Mob575 Concentrated PDM575 Prediluted



Formalin fixed paraffin embedded HPV and cervical cancer stained with p16 (Mob575).

**Immunogen:** Purified recombinant prokaryotic full length human P16 INK4 protein.

Isotype: IgG2a

Positive Control: Cervical carcinoma

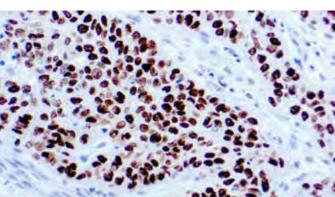
**Cellular Localization:** Nuclear and cytoplasmic

**Specificity:** P16 is a mitotic inhibitor protein. It competes with D-type cyclins to bind to cdk4 and cdk6. It acts as tumor suppressor and inhibits the progression of cells through the G1 phase of the cell cycle.

p27Kip1

Clone: DCS-72.F6

Catalog No.: Mob281 Concentrated PDM245 Prediluted



Formalin fixed paraffin embedded human colon carcinoma stained with p27Kip1 antibody (Mnh281)

**Immunogen:** BALB/C mice were injected with mouse recombinant

p27 protein. **Isotype:** IgG1

**Positive Control:** Colon carcinoma **Cellular Localization:** Nuclear

**Specificity:** This antibody is specific to a protein of 27 kDa known as p27Kip1 a cell cycle regulatory mitotic inhibitor. This antibody recognizes an epitope between amino acids 83-204 of p27. This antibody does not show any cross-reactivity with other related mitotic inhibitors.



p40

Catalog No.: RP163 Concentrated PDR055 Prediluted

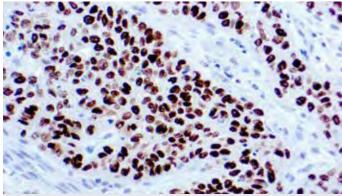


p57Kip2 Clone: 57P06

Catalog No.: Mob291 Concentrated PDM205 Prediluted







Formalin fixed paraffin embedded human lung squamous cell carcinoma stained with p40 antibody (PDR055).

**Immunogen:** A synthetic peptide corresponding to amino acids 5-17 of human p40.

Positive Control: Prostate
Cellular Localization: Nuclear

**Specificity:** p40 is a relatively unknown antibody that recognizes  $\Delta Np63$ -a p63 isoform suggested to be highly specific for squamous/basal cells. In a recent study, p40 is equivalent to p63 in sensitivity for squamous cell carcinoma, but it is markedly superior to p63 in specificity1, which eliminates a potential pitfall of misinterpreting a p63-positive adenocarcinoma or unsuspected lymphoma as squamous cell carcinoma. These findings strongly support the routine use of p40 in place of p63 for the diagnosis of pulmonary squamous cell carcinoma.



IVD

p53 Clone: D0-7

Catalog No.: Mob082 Concentrated PDM013 Prediluted

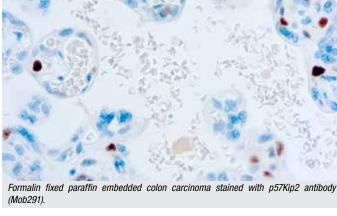


Immunogen: Recombinant human wild type P53 protein expressed in E. coli.

Isotype: IgG2b, kappa

Positive Control: Breast carcinoma Cellular Localization: Nuclear

**Specificity:** This antibody reacts with wild as well as mutant types of P53 protein. It recognizes an epitope in the N-terminus of p53 protein, known to reside between amino acids 35 to 45. This antibody can be demonstrated in 22-76% of the colon, stomach, bladder, breast, lung and testes cancers.



**Immunogen:** BALB/C mice were injected with mouse recombinant p57Kip2protein.

Isotype: IgG2b, kappa

Positive Control: Colon carcinoma Cellular Localization: Nuclear

**Specificity:** This antibody is specific to a protein of 57 kDa known as p57Kip2 a cell cycle regulatory mitotic inhibitor. This antibody does not cross-react with p27Kip1. p57Kip2 is a potent tight-binding inhibitor of several G1 cyclin complexes and a negative regulator of cell proliferation.



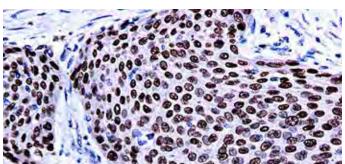
## Diagnostic BioSystems' ImmunoHisto-Sealer™

improves your stain over an extended period of time and eliminates accumulation of hazardous waste.

p63

Clone: DBR16.1

Catalog No.: RMAB086R Concentrated RMPD086R Prediluted



Formalin fixed paraffin embedded huma lung squamous cell carcinoma stained with p63 antibody (RMAB086R)

Immunogen: Recombinant human p63 protein fragment.

Isotype: IgG

Positive Control: Prostate Ca. Tonsil. Breast

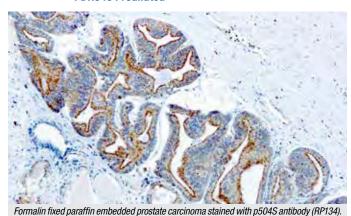
Cellular Localization: Nuclear

Specificity: p63 is a homolog of the tumor suppressor p53, it is identified in basal cells in the epithelial layers of a variety of tissues, including epidermis, cervix, urothelium, breast and prostate. p63, vital for the development of the prostate and selectively expressed by normal prostate basal cells, has been shown to be a promising complementary basal cell specific marker to High Molecular Weight-Cytokeratin (HMW-CK), for the differential diagnosis of benign prostatic lesions and prostatic carcinoma. p63 has also been shown to be a sensitive marker for lung squamous cell carcinomas (SqCC), with a sensitivity of ~90%. Specificity for lung SqCC, vs. lung adenocarcinoma (LADC), is approximately 80. In breast tissue, p63 has been identified in myoepithelial cells of normal ducts.

RUO for all markets

### p504S/α-Methylacyl-CoA Racemase (AMACR)

Catalog No.: RP134 Concentrated **PDR046 Prediluted** 



Immunogen: A synthetic human AMACR peptide.

Positive Control: Prostate carcinoma **Cellular Localization:** Cytoplasmic

Specificity: P504S has been recently described as a prostate cancerspecific gene that encodes a protein involved in the  $\beta$ -oxidation of branched chain fatty acids. Expression of p504S protein is found in prostatic adenocarcinoma but not in benign prostatic tissue. It stains premalignant lesions of prostate: high-grade prostatic intraepithelial neoplasia (PIN) and atypical adenomatous hyperplasia. P504S can be used as a positive marker for PIN.

IVD only for markets outside the U.S. RUO for U.S. market.

# Diagnostic BioSystems' **IHC Dection Systems**

Polymer Detection System

paraffin embedded tissues and cryostat sections.

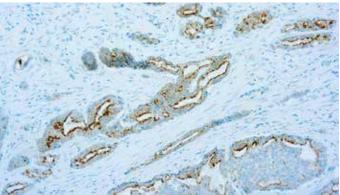
Streptavidin Biotin Detection System Convenient broad spectrum kits to detect both mouse and rabbit primary antibodies, and are available in ready-to-use formats.



p504s Clone: 13H4

Catalog No.: RMAB078 Concentrated





Formalin fixed paraffin embedded human prostate carcinoma stained with p504s (RMAB078).

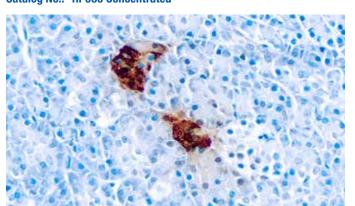
Immunogen: Human AMACR (P504S) polypeptide.

Isotype: Rabbit IgG

Positive Control: Prostate carcinoma **Cellular Localization:** Cytoplasmic

**Specificity:** P504S (AMACR) is an essential enzyme in the  $\beta$ -oxidation of branched-chain fatty acids. Recently, P504S was identified through cDNA library subtraction and microarrays in malignant prostate tissues. High expression of P504S protein is found in prostatic adenocarcinoma but not in benign prostatic tissue by immunohistochemical staining in paraffin-embedded tissues. The expression of P504S is also detected in two premalignant lesions of the prostate: high-grade prostatic intraepithelial neoplasia (PIN) and atypical adenomatous hyperplasia. Using P504S as a positive marker along with basal cell staining (34 BE12 or P63) as a negative marker could help to confirm the diagnosis of small focus of prostate carcinoma on needle biopsy.

### **Pancreatic Polypeptide** Catalog No.: RP030 Concentrated



Formalin fixed paraffin embedded human pancreas stained with Pancreatic Polypeptide antibody (RP030).

Immunogen: Synthetic human pancreatic polypeptide conjugated to keyhole limpet hemocyanin.

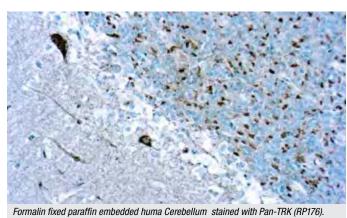
Positive Control: Pancreas

**Cellular Localization:** Cytoplasmic

Specificity: This antibody reacts with pancreatic polypeptide. It stains the periphery of islets, exocrine pancreatic parenchyma and the epithelium of small and medium sized ducts and acinar cells.

### Pan-TRK

Catalog No.: RP176 Concentrated **PDR176 Prediluted** 



Immunogen: Peptide-KLH conjugate with human Trk A (777-796aa).

Positive Control: Cerebral cortex tissue **Cellular Localization:** Cytoplasm

Specificity: Neurotrophic tyrosine kinase receptor (NTRK) is a family of 3 proto-oncogenes including NTRK1, NTRK2, and NTRK3 which encode Trk A, Trk B, and Trk C proteins, respectively. The latter are involved in biological processes such as neuronal survival, differentiation, and plasticity under physiological circumstances. In various cancers, oncogenic fusions involving the kinase domain of NTRK1, 2, or 3 are present. Pan-Trk IHC is a time- and tissue-efficient screen for NTRK fusions, particularly in drivernegative advanced malignancies and potential cases of secretory carcinoma and congenital fibrosarcoma. Pan-Trk IHC can help determine whether translation occurs for novel NTRK rearrangements.



# Diagnostic BioSystems' Chromogens

are available in a wide array of colors for both HRP and AP.

PAX-8 Clone: 4H7B3

Catalog No.: PDM180 Prediluted

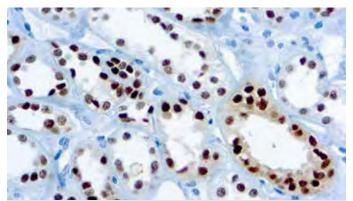


PD-1 Clone: EH33

> Catalog No.: Mob573 Concentrated PDM573 Prediluted







Formalin fixed paraffin embedded renal cell carcinoma stained with Pax-8 antibody (PDM180).

Immunogen: ag0306.

Isotype: IaG1

Positive Control: Normal kidney, renal cell, or serous ovarian carcinomas

Cellular Localization: Nuclear

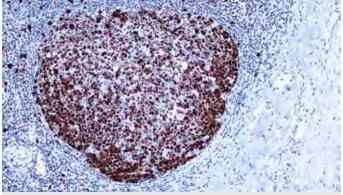
Specificity: PAX-8 is expressed in a high percentage of renal cell carcinomas and ovarian cancers. This mouse monoclonal PAX-8 antibody [BC12] has been designed to target restricted epitopes, and exhibits higher specificity and provides sharper staining than the PAX-8 rabbit polyclonal antibody. Unlike the polyclonal PAX-8, this mouse monoclonal antibody does not stain B-cells, and does not recognize epitopes of pancreatic origin and neuroendocrine cells in stomach and colon; thus providing superior specificity. The expression of the mouse monoclonal PAX-8 targets antigens found in normal kidney, thyroid and cervix, but not normal ovary. PAX-8 stains nuclei exclusively and performs well in formalin-fixed paraffin-embedded tissues.



### PCNA (Proliferating Cell Nuclear Antigen)

Clone: PC10

Catalog No.: Mob083 Concentrated **PDM014 Prediluted** 

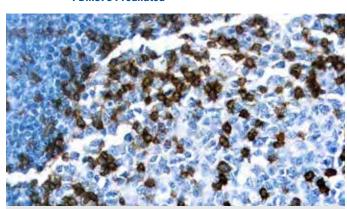


Formalin fixed paraffin embedded human tonsil stained with PCNA antibody (Mob083).

Immunogen: Rat PCNA made in the protein A expression vector pR1T2T.

Isotype: IgG2a, kappa Positive Control: Tonsil Cellular Localization: Nuclear

Specificity: PCNA is essential for cellular DNA synthesis. This antibody reacts with proliferating cells in a wide range of normal tissues. The significance of PCNA immunoreactivity in tumors in not fully established. However, in non-Hodgkin lymphoma a linear relation between Ki-67 and PCNA staining has been demostrated.



Formalin fixed paraffin embedded human tonsil stained with PD-1 (Mob573).

**Immunogen:** Recombinant protein fragment corresponding to the extracel-

lular domain of human PD-1 (as an Ig fusion protein).

Isotype: IgG2a, kappa Positive Control: Tonsil

Cellular Localization: Membrane

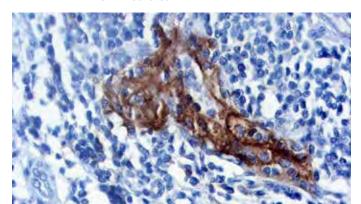
Specificity: PD-1 antibody aids in pathways that can protect tumors from cytotoxic T cells, ultimately inhibiting the antitumor immune response by deactivating cytotoxic T cells in the tumor microenvironment and preventing priming and activation of new T cells in the lymph nodes and subsequent recruitment to the tumor. PD-L1 binds to T-cell receptors B7.1 and PD-1, deactivating cytotoxic microenvironment. The PD-1 antibody has recently been used as a tool for predictive biomarkers in the diagnosis of various cancers. The PD-L1/B7.1 and PD-L1/PD-1 pathway, once deactivated, allow T cells to remain inhibited.

# Diagnostic BioSystems' Primary Antibodies

are well suited for both single-step and two-step polymer systems.

### PD-L1 Clone: 405-9A11

Catalog No.: Mob572 Concentrated PDM572 Prediluted



**Immunogen:** Last 19 amino acids at the carboxy-terminus of the human membrane-bound PD-L1 polypeptide, coupled to KLH.

Formalin fixed paraffin embedded squamous lung carcinoma stained with PD-L1 (Mob572).

Isotype: IgG1, kappa

Positive Control: Lung sqaumous cell carcinoma

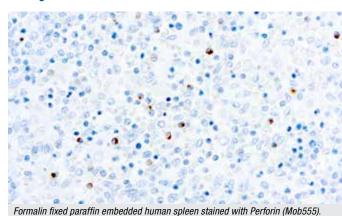
**Cellular Localization:** Membrane

**Specificity:** The programmed death receptor 1 (PD-1) protein is a cell-surface receptor on certain lymphocytes that, with its ligand programmed death ligand 1 (PD-L1), helps to down-regulate immune responses. Many cancer types express PD-L1 and evade immune recognition via the PD-1/PD-L1 interaction. Precision therapies targeting the PD-1/PD-L1 pathway have the potential to improve response and thereby offer a novel treatment avenue to some patients with cancer.



### Perforin Clone: 5B10

Catalog No.: Mob555 Concentrated



**Immunogen:** Recombinant protein corresponding to an external region of the C-terminus of the perforin molecule.

Isotype: IgG1

Positive Control: Spleen

**Cellular Localization:** Cytoplasmic

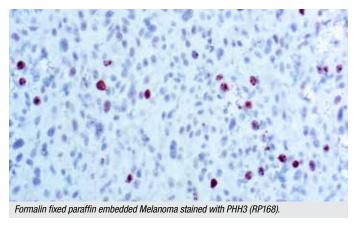
**Specificity:** This antibody is specific to a 70 kDa protein, which is a potent cytolytic pore-forming protein. Perforin is a specific marker of functionally active cytotoxic T-lymphocytes and natural killer cells. Perforin mediates cytolysis of target cells by membrane damage and apoptosis.

### рНН3









Immunogen: Phosphohistone protein isolated from human tissue.

Positive Control: Melanoma

**Cellular Localization:** Nuclear (mitotic figure)

**Specificity:** PHH3 can serve as a mitotic marker to separate mitotic figures from apoptotic bodies and karyorrhectic debris, which may be a very useful tool in diagnosis of tumor grades, especially in CNS, skin, gyn., soft tissue, and GIST.

### PIN5 Cocktail

Rabbit anti-p40 + Mouse anti-

Cytokeratin (HMW) and Rabbit anti-p504S (AMACR)

Clone: Mouse anti Cytokeratin H.M.W Clone:34BE12

Catalog No.: PDR057 Prediluted



Formalin fixed paraffin embedded human prostate carcinoma stained with Prostate Cocktail (PDR057)

Positive Control: Prostatic intraepithelial neoplasia (PIN).

Cellular Localization: p40: Nuclear Cytokeratin (HMW): Cytoplasmic P504S (AMACR): Cytoplasmic

**Specificity:** The combined detection of p504S, p40 and high molecular weight cytokeratin markers has been shown to be useful for distinguishing benign conditions mimicking cancer from prostate carcinomas. particular, these markers have been shown to be relevant in diagnosing the premalignant condition, prostatic intraepithelial neoplasia (PIN).

High molecular weight cytokeratin and p63 are commonly used markers of basal epithelial cells. Benign prostate tissue contains basal cells, which are absent in prostate cancers. As p40 is an isoform of p63, it also stains basal epithelial cells and can be used in prostate cancer tissue.

P504S has been recently described as a prostate cancer-specific gene. Expression of p504S (AMACR) protein is seen in prostatic adenocarcinoma but not in benign prostatic tissue. Anti-p540S stains premalignant lesions of prostate: high-grade PIN and atypical adenomatous hyperplasia.

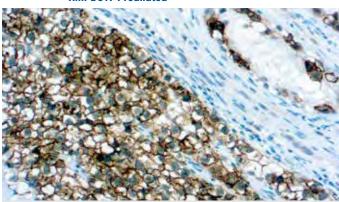
The PIN5 antibody combination may be particularly useful for confirming the diagnosis of prostate carcinoma in small foci of needle biopsies. The positive prostate cancer marker, p504S (AMACR), in conjunction with the negative basal cell markers (p40 and H.M.W cytokeratin) offers utility in diagnosing PIN in difficult cases where tissue may be limited

IVD only for markets outside the U.S. RUO for U.S. market.

### Placental Alkaline Phosphatase (PLAP) (SP15)

Clone: SP15

Catalog No.: RMAB017 Concentrated **RMPD017 Prediluted** 



Formalin fixed paraffin embedded Seminoma stained with Placental Alkaline Phosphatase (PLAP) (SP15) (RMAB017).

Immunogen: Recombinant protein encoding human placental alkaline phosphatase (PLAP).

Isotype: Rabbit IqG

Positive Control: Placenta

Cellular Localization: Cytoplasmic

Specificity: This antibody reacts with a membrane-bound isoenzyme (Regan and Nagao type) of placental alkaline phosphatase (PLAP) occurring in the placenta during the 3rd trimester of gestation. This antibody is highly specific to PLAP and shows no cross-reaction with other isoenzymes of alkaline phosphatases. It is useful in the identification of testicular germ cell tumors. Unlike germ cell tumors, PLAP-positive somatic cell tumors uniformly express epithelial membrane antigen (EMA).

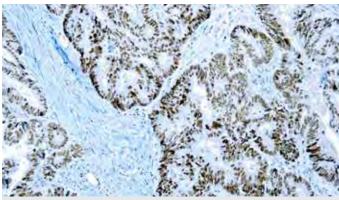
### PMS2 (Mismatch Repair Protein)

Clone: A16-4

Catalog No.: PDM171 Prediluted







Formalin fixed paraffin embedded colon adenocarcinoma stained with PMS2 (PDM171).

Immunogen: Recombinant human PMS2 (C-terminus).

Isotype: IgG1, κ

Positive Control: Colon carcinoma, tonsil

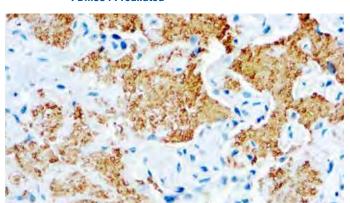
Cellular Localization: Nuclear

Specificity: Postmeiotic segregation increased 2 or PMS2 was originally discovered in S. cerevisiae and is part of the mismatch repair system. It resides on 7p22.2 and its gene product partners with MLH1 to help detect mismatches in DNA. Mutations in PMS2 have been reported in about two percent of families with Lynch syndrome (hereditary nonpolyposis colorectal cancer).

### Pneumocystis carinii

Clone: 3F6

Catalog No.: Mob091 Concentrated PDM584 Prediluted



Formalin fixed paraffin embedded human infected tissue stained with Pneumocystis carinii antibody (Mob091).

Immunogen: BALB/C mice were injected with P. carinii cysts isolated from

human lung.

Isotype: IgM. kappa

Positive Control: Infected lung
Cellular Localization: Alveolar spaces

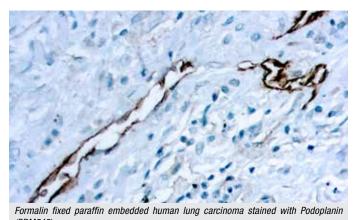
**Specificity:** This antibody reacts with P. carinii in the fixed human tissues. The antibody is specific against an 82 kDa parasite specific polypeptide. It does not cross-react with G. lamblia, T. gondii, T. cruzi, L. tropica, E. histolytica, C. albicans and P. falciparum.

IVD only for markets outside the U.S. RUO for U.S. market.

### Podoplanin/D2-40

Clone: D2-40

Catalog No.: Mob558 Concentrated PDM558 Prediluted



(PDM545).

Immunogen: Dysgerminoma tissue.

Isotype: IgG1, kappa
Positive Control: Tonsil

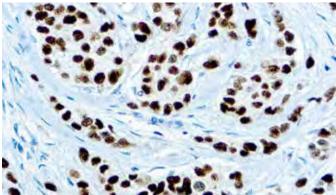
Cellular Localization: Transmembrane and Cytoplasmic

**Specificity:** Podoplanin identifies the ~38 kDa O-linked transmembrane sialoglycoprotein podoplanin, which is expressed in the endothelium of lymphatic capillaries, but not in the blood vasculature (1). Besides the expression in lymphatic endothelium, podoplanin is also found in a variety of other tissues, including mesothelial cells, reticular cells, follicular dendritic cells, ovarian and testicular germ cells (2). Results aid in the classification of lymphatic invasion of primary tumors.

### PR (Progesterone Receptor)

Clone: SP2

Catalog No.: RMAB002 Concentrated RMPD002 Prediluted



Formalin fixed paraffin embedded breast carcinoma stained with Progesterone Receptor antibody (RMAB002).

**Immunogen:** Recombinant protein encoding human progesterone receptor 412-526 aa.

Isotype: laG

Positive Control: Breast Carcinoma Cellular Localization: Nuclear

**Specificity:** The progesterone receptor (PgR) is an estrogen-regulated protein. It has been proposed that expression of PgR indicates a responsive estrogen receptor (ER) pathway. A number of studies have shown that PgR determination provides supplementary information to ER, both in predicting response to endocrine therapy and estimating survival. PgR has proved superior to ER as a prognostic indicator in some studies.

IVD only for markets outside the U.S. RUO for U.S. market.



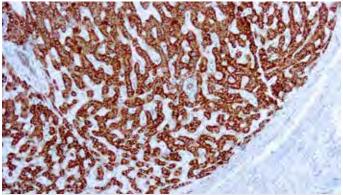
## Diagnostic BioSystems' ImmunoHisto-Sealer™

improves your stain over an extended period of time and eliminates accumulation of hazardous waste.

### Prohibitin Clone: II-14-10

Catalog No.: Mob323 Concentrated

PDM152 Prediluted



Formalin fixed paraffin embedded liver hepatocellular carcinoma stained with Prohibitin antibody (Mob323).

Immunogen: BALB/C mice were injected with purified recombinant rat prohibitin protein.

Isotype: IaG1

Positive Control: Heart

**Cellular Localization:** Cytoplasmic

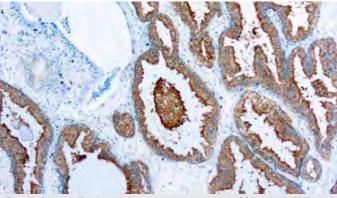
**Specificity:** This antibody is specific to a 30 kDa protein known as prohibitin. Prohibitin is an evolutionarily conserved protein located in the inner membrane of mitochondria. Prohibitin shows antiproliferative activity and has been proposed to play a role in normal cell cycle regulation, replicative senescence, cellular immortalization and tumor suppression.

### Prostate Specific Antigen (PSA)

Clone: 35H9

Catalog No.: Mob548 Concentrated

**PDM548 Prediluted** 



Formalin fixed paraffin embedded human prostate stained with PSA antibody (PDM548).

Immunogen: Prokaryotic recombinant protein corresponding to a portion of the N-terminus of the prostate specific antigen molecule.

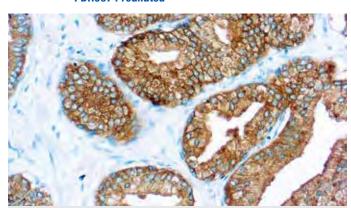
Isotype: IqG1.

Positive Control: Prostate carcinoma **Cellular Localization:** Cytoplasmic

**Specificity:** This antibody reacts with human prostate specific antigen.

### **Prostate Specific Antigen (PSA)**

Catalog No.: RP033 Concentrated **PDR007 Prediluted** 



Formalin fixed paraffin embedded prostate carcinoma stained with PSA antibody (RP033).

**Immunogen:** Prostate specific antigen isolated from human seminal plasma.

Positive Control: Prostate carcinoma **Cellular Localization:** Cytoplasmic

Specificity: This antibody reacts with PSA. The staining was observed in the prostatic ductal epithelium of normal and neoplastic prostate. No staining with any other cell type has been observed.

RUO in Europe.

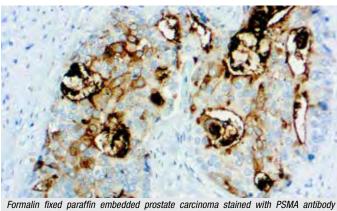
### Prostate Specific Membrane Antigen (PSMA)

Clone: 3E6

Catalog No.: Mob440 Concentrated







Immunogen: BALB/C mice were injected with LNCaP membrane preparation and immunoaffinity purified PSMA.

Isotype: IqG1

Positive Control: Prostate carcinoma

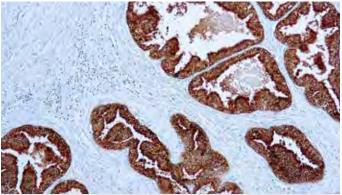
**Cellular Localization:** Cytoplasmic and/or membrane

**Specificity:** PSMA is a 750 amino acid type II membrane glycoprotein. PSMA is expressed in normal and malignant prostatic epithelium and in a subset of non-prostatic tissues. PSMA expression has been shown to correlate with the progression of prostate cancer, with highest levels expressed in hormone-refractory and metastatic disease. PSMA expresses in the neovasculature of a variety of non-prostatic solid tumors.

#### Prostatic Acid Phosphatase (PSAP)

Clone: PASE/4LJ

Catalog No.: Mob085 Concentrated PDM037 Prediluted



Formalin fixed paraffin embedded prostate carcinoma stained with PSAP antibody (Mob085).

**Immunogen:** BALB/C mice were injected with purified prostatic acid phosphatase from human seminal plasma.

Isotype: IgG1, kappa

Positive Control: Prostate carcinoma Cellular Localization: Cytoplasm

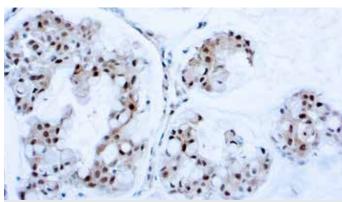
**Specificity:** This antibody is specific to human prostatic acid phosphatase. It reacts with the glandular epithelium of normal and hyperplastic prostate and with prostate adenocarcinoma.

RUO in Europe.

#### PTEN

Clone: 6H2.1

Catalog No.: Mob574 Concentrated PDM574 Prediluted



Formalin fixed paraffin embedded human breast carcinoma stained with PTEN antibody (Mob574).

Immunogen: C-terminal 100 amino acids of PTEN.

Isotype: IgG2a, kappa

Positive Control: Breast cancer

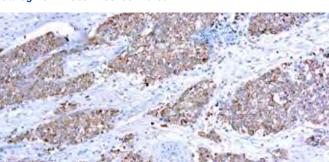
Cellular Localization: Nuclear and Cytoplasmic

**Specificity:** PTEN gene is a tumor suppressor gene that maps to chromosome 10q23. PTEN, a novel tumor suppressor, functions as a regulator of both cell cycle progression and apoptosis. Potentially, mutation and deletion of PTEN gene may result in a new signal transduction pathway related to human malignant tumors. Studies have demonstrated a reduction of PTEN expression in advanced breast cancers.



Clone: 51RAD01

Catalog No.: Mob324 Concentrated



Formalin fixed paraffin embedded human testis stained with Rad51 (Mob324).

Immunogen: BALB/C mice were injected with recombinant Rad51 protein.

Isotype: IgG1, kappa
Positive Control: Testis
Cellular Localization: Nuclear

**Specificity:** This antibody is specific to a 37-43 kDa protein known as Rad51. Rad51 is similar to RecA. Rad51 promotes homologous pairing and strand exchange within a regular nucleoprotein filament. Rad51 has been suggested to be involved in homologous recombination and in cell proliferation regulation.

IVD only for markets outside the U.S. RUO for U.S. market.

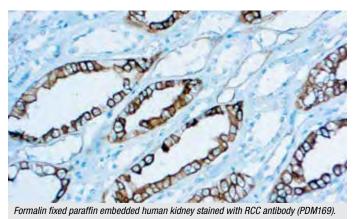
#### Renal Cell Carcinoma (RCC)

Clone: PN-15

Catalog No.: Mob465 Concentrated PDM169 Prediluted







**Immunogen:** BALB/C mice were injected with human renal cortical tissue homogenate.

**Isotype:** IgG1

Positive Control: Normal kidney or renal cell carcinoma

**Cellular Localization: Membrane** 

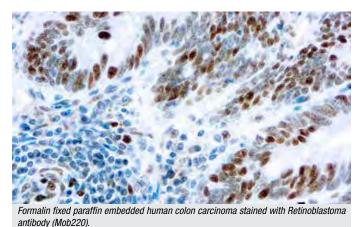
**Specificity:** This antibody recognizes a 200 kD glycoprotein (gp200) localized in the brush border of the proximal renal tebules and the luminal surface of Bowman's capsule. gp200 was expressed by 93% of primary and 84% of metastatic renal carcinomas. Gp200 glycoprotein is also localized in the breast lobules and ducts, parathyroid glands and epididymis.



#### Retinoblastoma Gene Protein (Rb)

Clone: 1F8

Catalog No.: Mob220 Concentrated **PDM111 Prediluted** 



Immunogen: Recombinant human Rb protein.

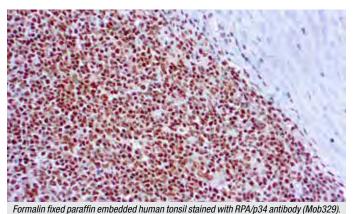
Isotype: IgG1, kappa

Positive Control: Colon carcinoma Cellular Localization: Nuclear

Specificity: This antibody recognizes human retinoblastoma gene protein. Rb gene, a prototype of tumor suppressor genes, has been associated with development and/or progression of bladder cancer as well as sarcoma and small cell lung cancer. Functional Rb gene loss has been reported to occur in bladder cancer and osteosarcoma. A significantly poorer tumorfree survival rate was noted for those patients who had a tumor with an altered Rb protein with or without vascular invasion.

RPA/p34 Clone: 9H8

Catalog No.: Mob329 Concentrated



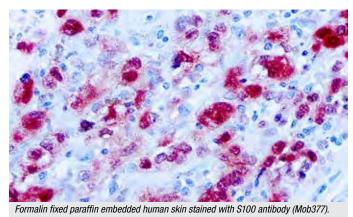
Immunogen: BALB/C mice were injected with purified human RPA protein.

Isotype: IgG1, kappa Positive Control: Tonsil Cellular Localization: Nuclear

Specificity: This antibody reacts with a 32-34 kDa protein known as replication protein A (RPA). RPA is involved in DNA replication, repair and recombination. Human RPA is a stable heterotrimer of 70 kDa, 32-34 kDa and 11-14 kDa subunits (RPA70, RPA32 and RPA14 respectively). RPA is required for the SV40 large tumor antigen-catalyzed unwinding for SV40 DNA and stimulates DNA polymerase  $\alpha$  and  $\delta$ .



Catalog No.: Mob377 Concentrated **PDM194 Prediluted** 



Immunogen: BALB/C mice were immunized with purified bovine brain

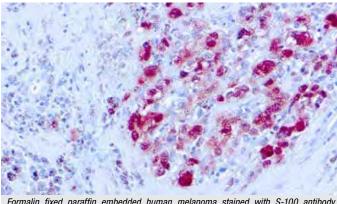
S-100 proteins. Isotype: IgG2a, Kappa Positive Control: Melanoma **Cellular Localization:** Cytoplasmic

Specificity: This antibody stains with S-100 protein. S-100 belongs to the family of calcium binding proteins such as calmodulin and troponin C. S-100a and S-100b proteins are two members of the S-100 family. S-100a is composed of an  $\alpha$  and  $\beta$  chain whereas S-100b is composed of two  $\beta$  chains. This antibody stains schwannomas, ependymomas, astrogliomas, almost all benign and malignant melanomas and their metastases.

S-100

Clone: SH-B1

Catalog No.: Mob111 Concentrated **PDM088 Prediluted** 



Formalin fixed paraffin embedded human melanoma stained with S-100 antibody (PDM088)

**Immunogen:** Purified bovine brain S-100ß preparation.

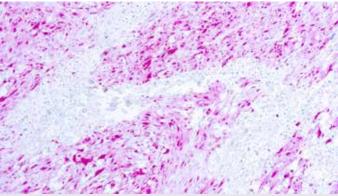
Isotype: IaG1

Positive Control: Melanoma Cellular Localization: Cytoplasmic

**Specificity:** This antibody is specific against an epitope located on the B chain (i.e. in S-100a and S-100b) but not on the  $\alpha$  chain of S-100 (i.e. in S-100a and S-100ao). This antibody can be used to localize S-100a and S-100b in various tissue sections.

S-100

Catalog No.: RP035 Concentrated **PDR008 Prediluted** 



Formalin fixed paraffin embedded human melanoma stained with S-100 antibody (PDR008)

Immunogen: Affinity purified S-100 protein isolated from cow brain.

Positive Control: Melanoma **Cellular Localization:** Cytoplasmic

Specificity: This antibody reacts with cow S-100 protein a and b. It shows strong cross-reactivity with human S-100 a and b. In the brain, it labels glial and ependymal cells. Melanocytes and Langerhans cells of the skin stain positive with this antibody.

Smad4

Catalog No.: RP173 Concentrated **PDR173 Prediluted** 



Formalin fixed paraffin embedded human Colon Ca stained with Smad4 (RP173).

**Immunogen:** Recombinant fragment corresponding to a region within amino acids 322 and 552 of SMAD4.

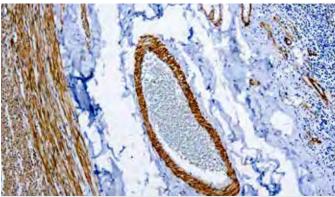
Positive Control: Colon Ca, Pancreas Ca Cellular Localization: Nuclear/ Cytoplasm

Specificity: SMADs are members of the MAD-related family of molecules. MAD-related proteins are a family of intracellular proteins that are essential components in the signaling pathways of the serine/threonine kinase receptors of the transforming growth factor beta superfamily. Alterations in the SMAD4 gene was primarily discovered in pancreatic cancer (duct adenocarcinoma) but occur in a variety of cancers such as colorectal cancer, gastric cancer, prostate cancer, melanomas, head and neck cancers and many others, though with higher frequencies in gastrointestinal tract cancers. Loss of SMAD4 expression in tumors has also been shown to affect cancer progression and therapy, such as reduced response to adjuvant chemotherapy.

#### **Smooth Muscle Myosin**

Clone: SMMS-1

Catalog No.: Mob467 Concentrated PDM175 Prediluted



Formalin fixed paraffin embedded human appendix stained with Smooth Muscle Myosin antibody (Mob467).

Immunogen: Human uterus smooth muscle extract.

Isotype: IgG1, Kappa

Positive Control: Colon, appendix **Cellular Localization:** Cytoplasmic

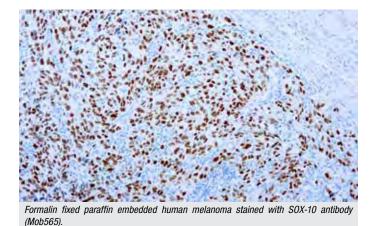
Specificity: Monoclonal anti-smooth muscle myosin reacts with myosin heavy chain polypeptides of 200 and 204 kDa. It does not react with skeletal, cardiac, or non-muscle myosin. In immunohistochemistry it stains vascular and visceral smooth muscle cells and cells that have smooth muscle-like characteristics.

SOX-10 Clone: 20B7









Immunogen: Human SOX-10 recombinant protein.

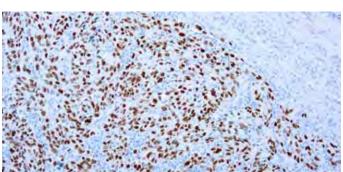
Isotype: IqG1

Positive Control: Melanoma **Cellular Localization: Nuclear** 

**Specificity:** SOX-10 is also an important marker in malignant tumors such as melanoma, breast carcinoma, gliomas, and benign tumors such as schwannomas. SOX-10 is considered as a very reliable marker for recognizing residual desmoplastic melanomas. In normal tissues, it is expressed in Schwann cells, melanocytes and myoepithelial cells of salivary, bronchial and mammary glands. SOX-10 expression is also observed in mast cells.

S0X-10 Clone: EP268

Catalog No.: RMAB077 Concentrated **RMPD077 Prediluted** 



Formalin fixed paraffin embedded human melanoma stained with SOX-10 (RMAB077)

**Immunogen:** Recombinant fragment corresponding to residues in human SOX-10 protein.

Isotype: Rabbit IgG

Positive Control: Melanoma Cellular Localization: Nuclear

Specificity: SOX-10 is widely expressed in normal human tissues including melanocytes and breast tissue. SOX-10 is also an important marker in malignant tumors such as melanoma, breast carcinomas of basal-like triple negative type, gliomas, and benign tumors such as schwannomas. More importantly, SOX-10 has been shown to be expressed in 97-100% of desmoplastic and spindle cell melanomas and has also been shown to be expressed in 100% of nevi. Spindle cell and desmoplastic melanomas are rare variants of invasive cutaneous melanoma, with an annual incidence rate of approximately 2 per 100,000. The majority of oligodendrogliomas and a large percentage of astrocytomas and poorly differentiated glioblastomas have also been shown to express SOX10.

## Diagnostic BioSystems' **Primary Antibodies**

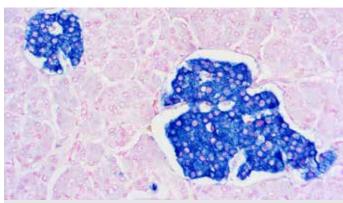
come in prediluted and concentrated formats, optimized to provide high quality immunohistochemistry stains.

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#### Synaptophysin

Clone: SP11

Catalog No.: RMAB018 Concentrated **RMPD018 Prediluted** 



Formalin fixed paraffin embedded human pancreas stained with Synaptophysin antibody (RMAB018).

Immunogen: A synthetic peptide of human synaptophysin.

Isotype: Rabbit IaG Positive Control: Pancreas

**Cellular Localization:** Cytoplasmic

Specificity: This antibody recognizes a protein of 38kDa, identified as synaptophysin. It labels normal neuroendocrine cells of human adrenal medulla, carotid body, skin, pituitary gland, thyroid, lung, pancreas, gastrointestinal mucosa, Paneth's cells in the gastrointestinal tract and gastric parietal cells. Neurons in the brain, spinal cord, and retina are also labeled. In combination with anti-chromogranin A and anti-NSE, antisynaptophysin is very useful in the identification of normal neuroendocrine cells and neuroendocrine neoplasms.

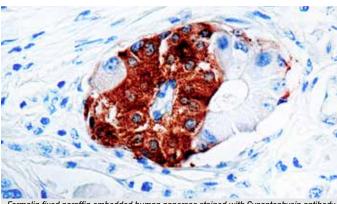
#### Synaptophysin

Clone: SYP02

Catalog No.: Mob399 Concentrated







Formalin fixed paraffin embedded human pancreas stained with Synaptophysin antibody

Immunogen: BALB/C mice were injected with a synthetic peptide encoding a region near the C-terminal end of the synaptophysin protein.

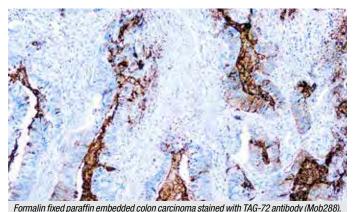
Isotype: IgG1

Positive Control: Pancreas **Cellular Localization:** Cytoplasmic

Specificity: This antibody is specific to a 38 kDa protein. Synaptophysin is an glycoprotein occurring in presynaptic vesicles of neurons in the brain, spinal cord, retina, vesicles of adrenal medulla and in neuromuscular junctions. This antibody reacts with neuroendocrine neoplasms of neural as well as epithelial types.

TAG-72/CA 72-4 Clone: B72.3





**Immunogen:** BALB/C mice were injected with membrane enriched fraction of a human breast carcinoma liver metastasis.

Isotype: IgG1, kappa

Positive Control: Breast carcinoma

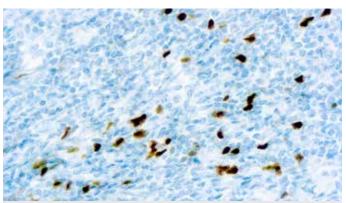
Cellular Localization: Cytoplasmic, cell surface

**Specificity:** This antibody is specific to an oncofetal antigen of >1,000 kDa known as tumor associated glycoprotein (TAG-72) or CA 72-4. This antibody defines the mucin carried sialylated-Tn antigen. This antibody stains the majority of human adenocarcinomas including colorectal, pancreatic, gastric, ovarian, endometrial, mammary and non-small cell lung cancer.

#### Tdt (Terminal Deoxynucleotidyl Transferase)

Clone: SEN28

Catalog No.: Mob545 Concentrated PDM096 Prediluted



Formalin fixed paraffin embedded human tonsil stained with Tdt antibody (Mob545).

Immunogen: BALB/C mice were injected with Tdt.

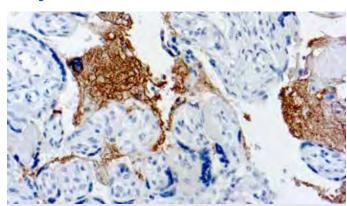
Isotype: IgG2a, kappa
Positive Control: Thymus
Cellular Localization: Nuclear

**Specificity:** This antibody stains a 60kDa peptide in human lymphoblasts. Tdt is present in the cells during immunoglobulin gene rearrangement and plays an important role in lymphocyte maturation. Tdt marks both T and B immature lymphocytes normally found in thymus and bone marrow.

#### Thrombospondin (TSP)

Clone: A6.1

Catalog No.: Mob315 Concentrated



Formalin fixed paraffin embedded human placenta stained with Thrombospodin antibody (Mob315).

**Immunogen:** BALB/C mice were injected with reduced and alkylated purified human TSP (fully denatured) from the supernatant of thrombinactivated platelets.

Isotype: IgG1

Positive Control: Tonsil

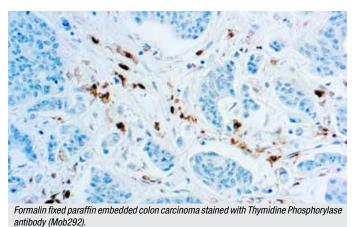
**Cellular Localization:** Secretory granules, Golgi complex, endoplasmic reticulum **Specificity:** This antibody is specific to 450 kDa (non-reduced) and 170 to 180 kD (reduced) form of thrombospondin. Thrombospondin is a protein from platelet  $\alpha$  granules. It is secreted at sites of platelet activation and aggregation and is involved in the differentiation of leukocytes, fibroblasts, smooth muscle and endothelial cells.

#### Thymidine Phosphorylase/

Platelet-Derived Endothelial Cell Growth Factor

Clone: P-GF.44C

Catalog No.: Mob292 Concentrated PDM292 Prediluted



Immunogen: BALB/C mice were injected with a recombinant full length

human thymidine phosphorylase (TP/PD-ECGF) protein.

Isotype: IqG1

**Positive Control:** Breast carcinoma **Cellular Localization:** Cytoplasmic, Nuclear

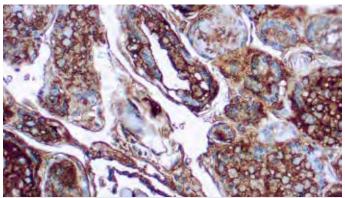
**Specificity:** This antibody is specific to a 55 kDa protein known as platelet-derived endothelial growth factor (PD-ECGF), or thymidine phosphorylase (TP). High levels of TP/PD-ECGF are observed in cancer patients. High intracellular levels of TP/PD-ECGF are associated with increased sensitivity to fluoropyrimidine chemotherapeutic agents.

### Thyroglobulin

Clone: 1D4

Catalog No.: Mob223 Concentrated

PDM576 Prediluted



Formalin fixed paraffin embedded thyroid stained with Thyroglobulin antibody (Mob223).

**Immunogen:** BALB/C mice were immunized with purified human

thyroglobulin. Isotype: IgG2a

Positive Control: Thyroid

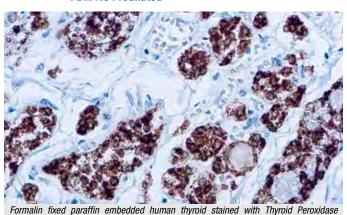
**Cellular Localization:** Cytoplasmic

Specificity: This antibody recognizes thyroglobulin in hyperplastic and neoplastic thyroid. Thyroglobulin is a protein of 670 kDa consisting of two identical subunits. Thyroglobulin is synthesized by the follicular epithelial cells of the thyroid.

### **Thyroid Peroxidase**

Clone: MoAb47

Catalog No.: Mob418 Concentrated PDM418 Prediluted



Immunogen: Human thyroid peroxidase (hTPO) purified from thyroid microsomes by immunoaffinity chromatography.

Isotype: IqG1

antibody (Mob418).

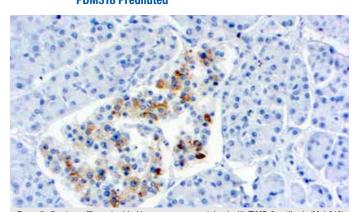
Positive Control: Thyroid

Cellular Localization: Cytoplasmic

Specificity: Thyroid peroxidase (TP0) is a transmembrane protein of 107kDa containing a heme prosthetic group. It is present as a dimer on the apical surface of thyroid follicular cells. TPO is the primary enzyme involved in thyroid hormone synthesis. Malignant thyroid tumors exhibit an anomaly in TPO resulting in lower affinity for anti-TPO. This antibody may aid in the differentiation between benign and malignant thyroid tumors.



Catalog No.: Mob318 Concentrated PDM318 Prediluted



Formalin fixed paraffin embedded human pancreas stained with TIMP-2 antibody (Mob318).

Immunogen: BALB/C mice were injected with a synthetic peptide from the N-terminal region of human TIMP-2.

Isotype: IgG2a, kappa

Positive Control: Colon carcinoma Cellular Localization: Cytoplasmic

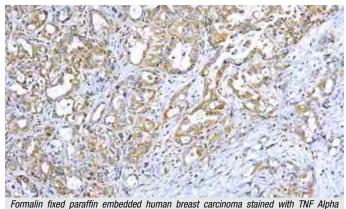
Specificity: This antibody is specific to 21 kDa protein known as TIMP-2. TIMP-1 and TIMP-2 are inhibitory enzymes of matrix metalloproteinase family. TIMP are of great importance in the maintenance of connective tissue integrity. TIMP-2 shows the highest binding affinity to both the latent (pro) and active forms of 72 kDa Type IV collagenase (MMP-2) and active form of 92 kDa type IV collagenase (MMP-9). TIMP inhibit the proteolytic invasiveness of tumor cells and normal placental trophoblast cells.

IVD only for markets outside the U.S. RUO for U.S. market.

#### TNF Alpha Clone: DBM15.28

Catalog No.: Mob502 Concentrated





Immunogen: Recombinant full-length human TNF-alpha protein.

Isotype: IgM, kappa

Positive Control: Histiocytoma, colon, pancreas

Cellular Localization: Cytoplasmic and extracellular (secreted)

Specificity: This MAb recognizes human 17-26kDa protein, which is identified as cytokine TNF Alpha (Tumor Necrosis Factor Alpha). Monomeric human TNF Alpha is a 157 amino acid protein (non-glycosylated) with a reported molecular weight of 17 kDa and can be expressed as a free molecule, also TNF Alpha is generated as a precursor form called transmembrane TNF Alpha can be expressed as a cell surface type II polypeptide consisting of 233 amino acid residues molecular weight 26 kDa. TNF Alpha is an important cell-signaling component of the immune system. It is a protein secreted by LPS stimulated macrophages, and causes tumor necrosis when injected into tumor bearing mice. TNF Alpha is currently being evaluated in treatment of certain cancers and AIDS Related Complex.



## Diagnostic BioSystems' **Primary Antibodies**

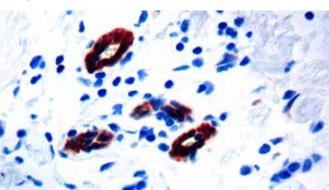
are well suited for both single-step and two-step polymer systems.

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#### Transglutaminase II

Clone: CUB 7402

Catalog No.: Mob353 Concentrated



Formalin fixed paraffin embedded breast carcinoma stained with Transglutaminase II antibody (Mob353).

Immunogen: BALB/C mice were injected with purified guinea pig liver transglutaminase.

Isotype: IqG1

Positive Control: Breast carcinoma

Cellular Localization: Cytoplasmic, cell membrane, extracellular matrix

Specificity: This antibody reacts with a 77-85 kDa protein known as transglutaminase II (TGase II). TGase II catalyzes calcium-dependent posttranslational modification of proteins by formation of an isopeptide bond within or between polypeptide chains. Different tissue and cell types express varying amounts of tissue transglutaminase.

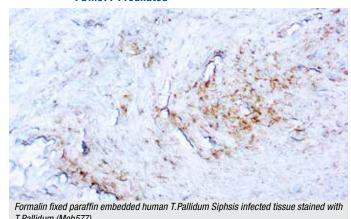
#### Treponema Pallidum

**Clone: 2121** 

Catalog No.: Mob577 Concentrated PDM577 Prediluted







**Immunogen:** Full Length native protein corresponding to Treponema pallidum.

Isotype: IaG2b

Positive Control: T. Pallidum Infected Tissue

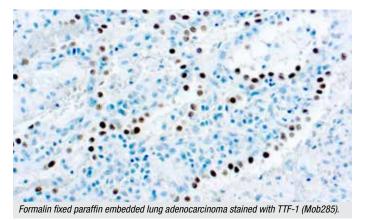
**Cellular Localization:** Cytoplasmic

Specificity: Treponema pallidum is the causative agent of syphilis. It is a gram negative spirochete, a helical to sinusoidal bacterium with outer and cytoplasmic membranes, a thin peptidoglycan layer, and periplasmic flagella.

#### TTF-1 (Thyroid Transcription Factor-1)

Clone: 8G7G3/1

Catalog No.: Mob285 Concentrated PDM104 Prediluted



Immunogen: BALB/C mice were injected with a recombinant rat protein.

Isotype: IgG1

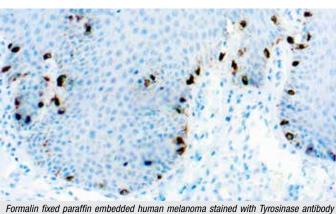
Positive Control: Lung
Cellular Localization: Nuclear

Specificity: This antibody is specific to a 40 kDa protein, which is identified as thyroid transcription factor (TTF-1). TTF-1 is expressed in epithelial cells of the thyroid gland and lung. TTF-1 stains primary lung adenocarcinoma and small cell carcinoma but does not stain colon and breast carcinoma.

#### Tyrosinase, Melanoma Marker

Clone: T311

Catalog No.: Mob290 Concentrated PDM150 Prediluted



Formalin fixed paraffin embedded human melanoma stained with Tyrosinase antibody (Mob290).

**Immunogen:** BALB/C mice were injected with a recombinant tyrosinase protein.

Isotype: IgG2a

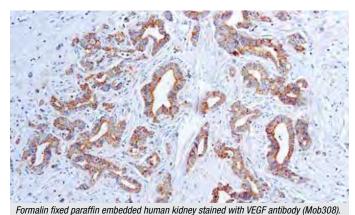
Positive Control: Melanoma
Cellular Localization: Cytoplasmic

**Specificity:** This antibody is specific to a cluster of proteins between 70-80 kDa known as tyrosinase. This antibody does not show any cross-reaction with MAGE-1 and tyrosinase-related protein-1, TRP-1/gp75. Staining of melanomas with this antibody showed tyrosinase in melanotic as well as amelanotic variants.

#### Vascular Endothelial Growth Factor (VEGF)

Clone: VG1

Catalog No.: Mob308 Concentrated PDM165 Prediluted



Immunogen: BALB/C mice were injected with a recombinant VEGF protein.

Isotype: IgG1, kappa

Positive Control: Angiosarcoma

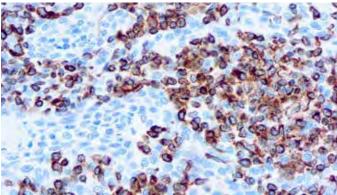
Cellular Localization: Cytoplasmic, cell membrane, extracellular matrix

**Specificity:** This antibody is specific to a cluster of proteins between 19-22 kDa (reduced). VEGF is a homodimeric disulfide-linked glycoprotein involved in angiogenesis, which promotes tumor progression and metastasis. It exhibits potent mitogenic and permeability-inducing properties specific for the vascular endothelium.

#### Vimentin, Porcine

Clone: V9

Catalog No.: Mob090 Concentrated PDM029 Prediluted



Formalin fixed paraffin embedded human tonsil stained with Vimentin antibody (PDM029).

**Immunogen:** BALB/C mice were injected with purified vimentin from porcine eye lens.

Isotype: IgG1, kappa

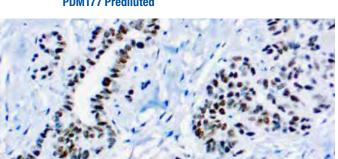
**Positive Control:** Sarcoma, tonsil **Cellular Localization:** Cytoplasm

**Specificity:** This antibody reacts with the 57 kDa intermediate filament protein present in the cells of mesenchymal origin. The antibody does not show any cross-reactivity with other intermediate filament proteins. However, it shows a broad interspecies cross-reactivity.

#### Wilms Tumor-1 Protein (WT-1)

Clone: 6F-H2

Catalog No.: Mob437 Concentrated PDM177 Prediluted



Formalin fixed paraffin embedded Wilms tumor stained with WT-1 antibody (Mob437).

**Immunogen:** BALB/C mice were injected with truncated human WT1 protein corresponding to N-terminal amino acids 1-181.

Isotype: IgG1, Kappa

Positive Control: Wilms tumor

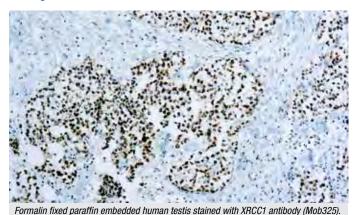
Cellular Localization: Nuclear and/or cytoplasmic

**Specificity:** Wilms tumor-1 (WT-1), is a gene involved in the induction of Wilms tumor, a pediatric renal malignancy. Wilms tumor is associated with mutations of WT-1, a zinc-finger transcription factor that is essential for the development of the metanephric kidney and the urogenital system. The WT-1 gene is normally expressed in fetal kidney and mesothelium, and its expression has been suggested as a marker for Wilms tumor and mesothelioma.

#### XRCC1

Clone: 33-2-5

Catalog No.: Mob325 Concentrated



Immunogen: BALB/C mice were injected with recombinant human

XRCC1 protein.

Isotype: IgG2b
Positive Control: Testis

Cellular Localization: Nuclear

**Specificity:** This antibody is specific to an 85 kDa protein known as XRCC1. X-ray repair cross complementing 1 (XRCC1) protein plays a role in excision repair of DNA after ionizing irradiation. XRCC1 binds to DNA ligase III through the C-terminal 96 amino acids and to DNA polymerase  $\beta$  through the N-terminal half. In testis XRCC1 is expressed at high levels.

IVD only for markets outside the U.S. RUO for U.S. market.



# Diagnostic BioSystems' IHC Dection Systems

### Polymer Detection System

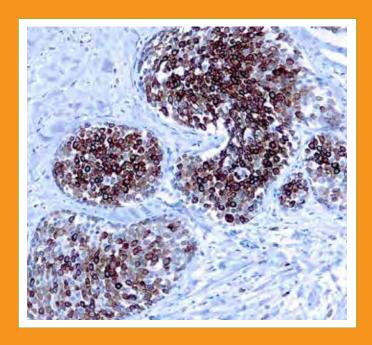
Suitable for demonstrating antigens in formalin-fixed paraffin embedded tissues and cryostat sections.

Streptavidin Biotin Detection System Convenient broad spectrum kits to detect both mouse and rabbit primary antibodies, and are available in ready-to-use formats.

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## MOH DAB Kit

The Diagnostic BioSystems MOHs DAB kit is intended for in vitro diagnostic use and is designed for rapid IHC staining in frozen tissue sections and paraffin-embedded tissue sections. Where the time to final results is critical, such as Mohs micrographic surgery, this MOHs DAB Kit can provide reliable IHC results in less than 20 minutes. The clinical interpretation of any staining or its absence should be complemented by morphological studies using proper controls and should be evaluated within the context of the patient's clinical history and other diagnostic tests and proper controls interpreted by a qualified pathologist and/or physician.



The Diagnostics BioSystems MOHs DAB Kit consists of a ready-to-use HRP-Polymer, a concentrated solution of DAB chromogen, and a DAB Substrate Buffer for dilution of the DAB Chromogen. This Kit is optimized for detection of mouse or rabbit primary antibodies.

After an initial incubation of the tissue with the selected primary antibody, the HRP-Polymer is next applied to the tissue section. The working DAB solution is prepared by diluting the DAB Chromogen with the DAB Substrate Buffer. After incubation with the HRP-Polymer the tissue is next incubated with the working solution of DAB. The development of a brown reaction product indicates the presence of the antigen of interest, whereas the absence of a brown reaction product indicates the absence of interest.

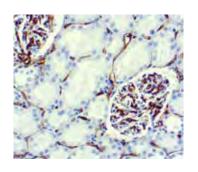
MOH DAB KIT CATALOG NO. K083 100 TESTS

## Advantages of MOH DAB:

- Rapid two-step immunohistochemistry protocol
- Time to results in <20 minutes</li>

- No rinse step required after primary antibody
- Optimized for use with Diagnostic BioSystems Rapid IHC antibodies

## MOH DAB Kit Prediluted Abs



CD34

IVE

IVD

IVD

IVD

Clone: QBEND/10 Catalog No.: PDM050-MOH Volume: 3ml Prediluted

Formalin fixed paraffin embedded human Renal Cell Cancer stained with CD34 (PDM050-M0H).

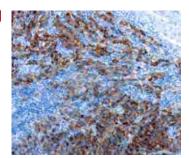


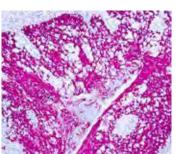
IV

Clone: HMB45

Catalog No.: PDM011-M0H Volume: 3ml Prediluted

Formalin fixed paraffin embedded human Melanoma stained with Melanoma (PDM011-MOH).





Cytokeratin

Clone: CAM 5.2

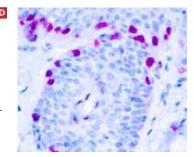
Catalog No.: PDM181-MOH Volume: 3ml Prediluted

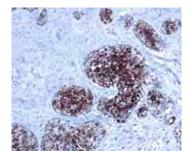
Formalin fixed paraffin embedded human Breast Cancer stained with CK7 (PDM563-MOH).



Catalog No.: PDM168-MOH Volume: 3ml Prediluted

Formalin fixed paraffin embedded human Melannoma stained with Microphthalmia Transcription Factor (MITF) (PDM168-MOH).



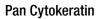


Cytokeratin 7

Clone: LP1K

Catalog No.: PDM563-MOH Volume: 3ml Prediluted

Formalin fixed paraffin embedded human Breast Cancer stained with CK7 (PDM563-MOH).



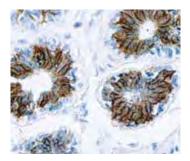
IVD

Clone: E1/AE3

Catalog No.: PDM072-MOH Volume: 3ml Prediluted

Formalin fixed paraffin embedded human colon stained with Cytokertain Pan (PDM072-MOH).





**Epithelial Antigen** 

Clone: Ber-EP4

Catalog No.: PDM131-MOH Volume: 3ml Prediluted

Formalin fixed paraffin embedded human Breast stained with Epithelial Antigen (PDM131-MOH).

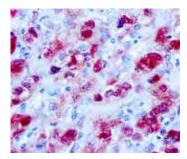
S100

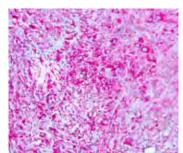
IVE

Clone: 4C4.9

Catalog No.: PDM194-MOH Volume: 3ml Prediluted

Formalin fixed paraffin embedded human Breast Cancer stained with CK7 (PDM563-MOH).





MART-1

Clone: A103

Catalog No.: PDM153-MOH Volume: 3ml Prediluted

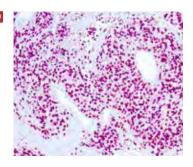
Formalin fixed paraffin embedded human Melanoma stained with MART-1(PDM153-MOH).

SOX-10

Clone: 20B7

Catalog No.: PDM565-MOH Volume: 3ml Prediluted

Formalin fixed paraffin embedded human Melanoma stained with SOX-10 (PDM565-MOH).



# FITC Conjugated Antibodies

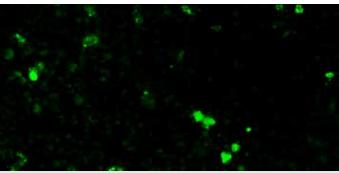
Diagnostic BioSystems offers fluorescein isothiocynate (FITC) conjugated antibodies. Fluorescent dye-conjugated antibodies can be used in a variety of applications such as immunohistochemistry, fluorescence microscopy and flow cytometry.

### C1q Complement FITC-Conjugated Antibody



IVD

Catalog No.: F010



Formalin fixed paraffin embedded human spleen stained with C1q Complement-FITC (F010).

**Immunogen:** C1q isolated from the normal human serum.

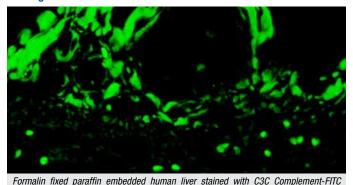
**Specificity:** This antibody reacts with the human C1q complement. Traces of contaminating antibodies have been removed by solid phase absorption with human plasma proteins. This antibody is well suited for tissue section staining but may also be used for other applications.

## C3c Complement FITC-Conjugated Antibody





Catalog No.: F003



**Immunogen:** C3c Complement isolated from complement-activated human serum.

**Specificity:** This antibody reacts with the human C3c complement and the C3c part of C3 and C3b. It may cross react with the C3c complement from cat, cow, dog, goat, guinea pig, kangaroo, mink, mouse, rat, sheep, and swine. Traces of contaminating antibodies have been removed by solid phase absorption with human plasma proteins. This antibody is well suited for tissue section staining but may be also used for other applications.

### C4c Complement FITC-Conjugated Antibody





Catalog No.: F005

Formalin fixed paraffin embedded human kidney stained with C4C Complement-FITC (F005)

**Immunogen:** C4c Complement isolated from complement-activated human serum.

**Specificity:** This antibody reacts with human C4, C4b, and C4c but does not react with the C4d epitope. Traces of contaminating antibodies have been removed by solid phase absorption with human plasma proteins. This antibody is well suited for tissue section staining but may also be used for other applications.

## Fibrinogen FITC-Conjugated Antibody Catalog No.: F006





**Immunogen:** Fibrinogen isolated from human plasma.

**Specificity:** This antibody reacts with native fibrinogen and with fibrinogen fragments D, E, X, and Y. Traces of contaminating antibodies have been removed by solid phase absorption with human plasma proteins. This antibody is well suited for tissue section staining but may also be used for other applications.

Formalin fixed paraffin embedded human placenta stained with Fibrinogen-FITC (F006).

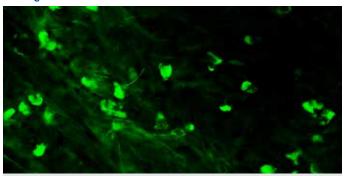
## IgA (alpha chain) FITC-Conjugated Antibody Catalog No.: F007



Catalog No.: F001







Formalin fixed paraffin embedded human tonsil stained with IgA-FITC (F007)

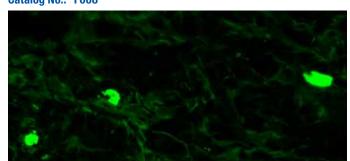
Immunogen: IgA isolated from human serum.

**Specificity:** This antibody reacts with the alpha chain of human IgA. Traces of contaminating antibodies have been removed by solid phase absorption with human plasma proteins. This antibody is well suited for tissue section staining but may also be used for other applications.

## IgG (Gamma chain) FITC-Conjugated Antibody Catalog No.: F008



IVD



Formalin fixed paraffin embedded human tonsil stained with IgG-FITC (F008).

Immunogen: IgG isolated from human serum.

**Specificity:** This antibody reacts with the gamma chain of human IgG. Traces of contaminating antibodies have been removed by solid phase absorption with human plasma proteins. This antibody is well suited for tissue section staining but may also be used for other applications.

## IgM (Mu chain) FITC-Conjugated Antibody Catalog No.: F009



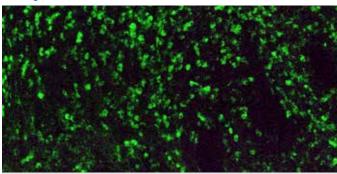


Formalin fixed paraffin embedded human tonsil stained with IgM-FITC (F009).

**Immunogen:** IgM isolated from the serum of a patient with Waldenstorm's macroglobulinaemia.

**Specificity:** This antibody reacts with the Mu chain of human IgM. Traces of contaminating antibodies have been removed by solid phase absorption with human plasma proteins. This antibody is well suited for tissue section staining but may also be used for other applications.

## Kappa Light Chain FITC-Conjugated Antibody



Formalin fixed paraffin embedded human tonsil stained with Kappa-FITC (F001).

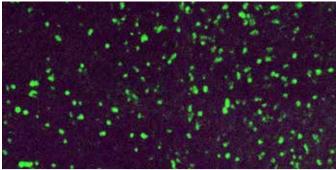
**Immunogen:** Pool of human kappa light chain isolated from the urine of patients with Bence Jones Proteinuria.

**Specificity:** Traces of contaminating antibodies have been removed by solid phase absorption. Only the kappa precipitation line appeared in cross immunoelectrophoresis. This antibody is well suited for tissue section staining but may be used for other applications.

## Lambda Light Chain FITC-Conjugated Antibody Catalog No.: F002







Formalin fixed paraffin embedded human tonsil stained with Lambda-FITC (F002).

**Immunogen:** Pool of human Lambda light chain isolated from the urine of patients with Bence Jones Proteinuria.

**Specificity:** Traces of contaminating antibodies have been removed by solid phase absorption. Only the lambda precipitation line appeared in cross immunoelectrophoresis. This antibody is well suited for tissue section staining but may also be used for other applications.

## DBS Fluorescein Isothiocynate (FITC) Conjugated Antibodies

Visit us at dbiosys.com

# FITC CF<sup>™</sup>488 Conjugated Antibodies

Diagnostic BioSystems now offers CF488 Conjugated Fluorescent Antibodies. Compared to traditional FITC Conjugated Antibodies, CF488 Conjugated Antibodies have high antibody specificity as they only carry minimally negative charges. They also have a shorter emission wavelength for less fluorescence spill-over into the red channel.

Less non-specific binding and less red spill-over than traditional rhodamine chemistry

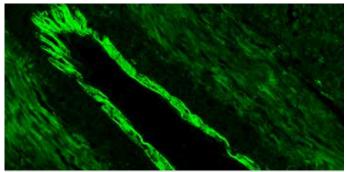
Unrivaled near-infrared dye to give less non-specific staining

Resists photobleaching for a longer period of time compared to common fluorescent-conjugated antibodies

Better resolution in microscopy compared to synthetic dyes

#### Albumin CF™488-Conjugated Antibody

Catalog No.: FLC215



Formalin fixed paraffin embedded human Liver stained with Albumin-CF488 (FLC215).

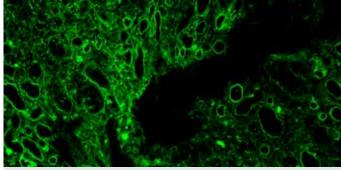
common fluorescent-conjugated antibodies.

Immunogen: Recombinant full-length human ALB protein.

Specificity: Albumin is a soluble, monomeric protein, which comprises about one half of the blood serum protein. Albumin functions primarily as a carrier protein for steroids, fatty acids, and thyroid hormones and plays a role in stabilizing extracellular fluid volume. Antibodies conjugated to CFTM488 resist photobleaching for a longer period of time compared to

Complement 4d (C4d)
CF™488-Conjugated Antibody

Catalog No.: FLC211



Formalin fixed paraffin embedded human kidney stained with C4d-CF488 (FLC211).

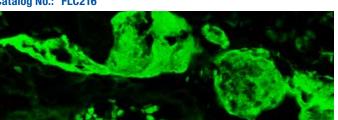
Immunogen: Recombinant human Complement 4d protein.

Specificity: Anti-C4d, combined with anti-C3d, can be utilized as a tool for diagnosis of allograft rejection that may warrant a prompt and aggressive anti-rejection treatment. Conjugated to CF™488, it shows less non-specific binding and less red spill-over than traditional rhodamine chemistry.



#### Fibrinogen CF<sup>™</sup>488-Conjugated Antibody

Catalog No.: FLC216



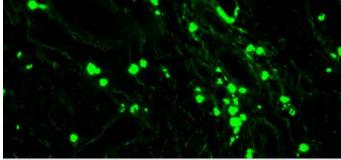
Formalin fixed paraffin embedded human Placenta stained with Fibrinogen-CF488 (FLC216).

**Immunogen:** IgG fraction from antisera obtained by ammonium sulfate precipitation and DEAE-Sephacel ion-exchange chromatography.

Specificity: This MAb is specific to Fibrinogen. Fibrinogen is a protein, a coagulation factor (factor I) that is essential for blood clot formation. Fibrinogen is also one of several blood factors that are called acute phase reactants. Blood levels of fibrinogen along with other acute phase reactants rise sharply with conditions causing acute tissue inflammation or damage. Conjugated to CF™488, it shows unrivaled near-infrared dye to give less non-specific stainings.

#### Cocktail IgA+IgG+IgM CF™488-Conjugated Antibody

Catalog No.: FLC212

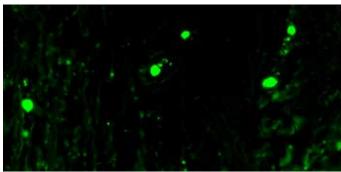


Formalin fixed paraffin embedded human tonsil stained with Cocktail IgA,G,M-CF488 (FLC212).

**Specificity:** This cocktail is identified to heavy chain of IgA, IgG and IgM. This novel cocktail conjugated to CF™488 gives less non-specific binding and less red spill-over than traditional rhodamine chemistry.

#### IgA CF™488-Conjugated Antibody

Catalog No.: FLC207



Formalin fixed paraffin embedded human tonsil stained with IgA-CF488 (FLC209).

Immunogen: Purified human alpha heavy chain.

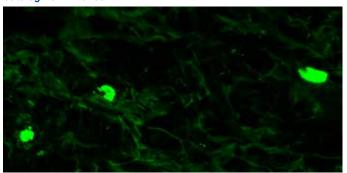
Specificity: Immunoglobulin A (IgA) is the main protein of the mucosal immune system. It is generated by B-cells in gut-associated lymphoid tissues. Antibodies conjugated to CF™488 resist photobleaching for a longer period of time compared to common fluorescent-conjugated antibodies.

#### IgG CF<sup>™</sup>488-Conjugated Antibody









Formalin fixed paraffin embedded human tonsil stained with IgG-CF488 (FLC208).

**Immunogen:** Purified human alpha heavy chain.

Specificity: This MAb is useful in the identification of leukemias, plasmacytomas, and certain non-Hodgkin's lymphomas. Demonstration of clonality in lymphoid infiltrates indicates that the infiltrate is clonal and therefore malignant Immunogen. CF™488 conjugated antibodies give better resolution in microscopy compared to synthetic dyes.

# DBS CF488™ Fluorescein Isothiocynate (FITC) Conjugated Antibodies

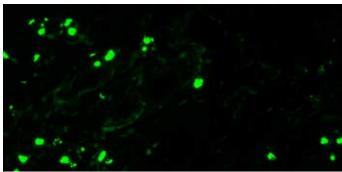
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#### IgM CF™488-Conjugated Antibody

IV.

IVD

Catalog No.: FLC209



Formalin fixed paraffin embedded human tonsil stained with IgM-CF488 FITC (FLC207).

Specificity: This MAb is useful in the identification of leukemias, plasmacytomas, and certain non-Hodgkin's lymphomas. Conjugated to CF™488, it shows unrivaled near-infrared dye to give less non-specific staining.

#### Kappa CF<sup>™</sup>488-Conjugated Antibody



IVD

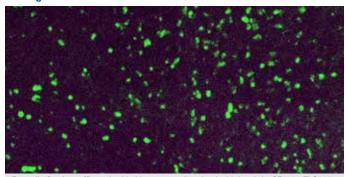
Catalog No.: FLC213

Formalin fixed paraffin embedded human tonsil stained with Kappa-CF488 FITC (FLC213).

**Immunogen:** Recombinant full length human IGKC; Immunoglobin KM. **Specificity:** This antibody reacts with B cell follicles in human lymphoid tissues. The mantle zones give a mosaic pattern, while the germinal centers show a coarse meshwork pattern of staining. This antibody stains free as well as bound kappa light chains. CF™488 conjugated antibodies give better resolution in microscopy com-pared to synthetic dyes.

#### Lambda Light Chain CF™488-Conjugated Antibody

Catalog No.: FLC214



Formalin fixed paraffin embedded human tonsil stained with Lambda-CF488 (FLC214).

Immunogen: Purified human IgG.

**Specificity:** This antibody recognizes lambda light chains of human immunoglobulins, which may be useful in the identification of leukemias, plasmacytomas, and certain non-Hodgkin's lymphomas. Conjugated to CF<sup>TM</sup>488, it can resist photobleaching for a longer period of time compared to common fluorescent-conjugated antibodies.

# DBS CF488™ Fluorescein Isothiocynate (FITC) Conjugated Antibodies

Visit us at dbiosys.com

# Detection Systems

Immunohistochemistry is a highly sensitive method that allows the localization of antigens within a cell or a tissue with high resolution. The method is based on the use of a primary antibody that specifically binds to its complimentary antigen. The bound antigen may be visualized by a variety of methods.

### Diagnostic BioSystems offers two types of IHC Detection Systems:

#### Polymer Detection System

Streptavidin Biotin Detection System

#### **Polymer Detection System**

Diagnostic BioSystems offers two types of polymer-based detection systems for biotin-free immunohistochemistry. These detection systems are suitable for demonstrating antigens in formalin-fixed paraffin embedded tissues and cryostat sections.

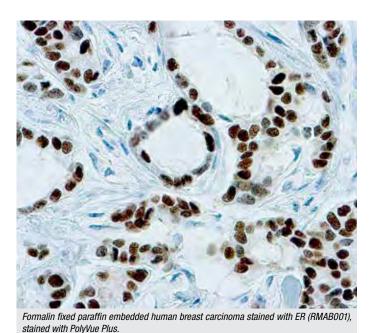
#### Streptavidin Biotin Based Detection System

Diagnostic BioSystems offers immunostaining detection systems based on streptavidin/biotin technology. We offer convenient broad spectrum kits to detect both mouse and rabbit primary antibodies, and are available in ready-to-use formats.

## PolyVue Plus<sup>™</sup> Two Step Detection System

## Highly Sensitive. Exceptional Detection System.

Diagnostic BioSystems' PolyVue Plus is a highly sensitive, biotin-free immunostaining detection system formulated to simultaneously detect mouse as well as rabbit antibodies. PolyVue Plus employs an enhancer reagent with the polymeric enzyme-linked anti-rabbit and anti-mouse immunoglobulins for two-step detection, yielding higher sensitivity while maintaining the extremely clean background. The enhanced sensitivity of PolyVue Plus enables superior detection of antibodies at lower concentration or weaker signals.



#### PolyVue Plus™



#### Mouse/Rabbit HRP/DAB Detection System

Catalog No : PVP25D 25 tests
PVP100D 100 tests
PVP250D 250 tests
PVP1000D 1000 tests

The PolyVue Plus Mouse/Rabbit HRP/DAB Detection System is a non-biotin, two-step detection system suitable for labeling antigens in formalin-fixed paraffin-embedded tissues and cryostat sections. The PolyVue Plus Detection System may also be used with blood smears, cytosmears, and cell preparations. This system has been developed by directly labeling immunoglobulins with enzymes using a proprietary tandem hyperlabelling technology. This ensures consistent and reproducible immunostaining for all types of nuclear, cytoplasmic and membrane antigens in different types of tissues with significantly lower background than detection systems using biotin and avidin conjugates.

**Kit Contents:** Tissue Primer, Background Blocker, PolyVue Plus Mouse/Rabbit HRPEnhancer, PolyVue Plus Mouse/Rabbit HRPLabel, Stable DAB Plus Buffer, Stable DAB Plus Chromogen, and an empty mixing bottle.

## Advantages of PolyVue Plus<sup>™</sup> Over Conventional Detection Systems:

- High sensitivity
- Hiah specificity
- Clean background
- Highly reproducible staining
- Suitable for manual as well as automated stainers
- Shorter incubation times for detection reagents

## UnoVue Plus™ One Step Detection System

Quick. Consistent. Reproducible.

Diagnostic BioSystems is committed to providing immunohistochemistry solutions at an affordable cost. Experience greater efficiency over a broad spectrum of antibodies.

#### UnoVue Plus™





The UnoVue Plus Mouse/Rabbit AP/PermaRed Detection System is a non-biotin, one-step Mouse/Rabbit polymer detection system suitable for demonstrating antigens in formalin-fixed paraffin-embedded tissues and cryostat sections. The UnoVue Plus Detection System may also be used with blood smears, cytosmears, and cell preparations.

**Kit Contents:** Anti-Mouse/Rabbit AP Polymer, PermaRed AutoPlus Buffer, and PermaRed AutoPlus Chromogen.

#### UnoVue Plus<sup>™</sup> Mouse HRP/DAB Detection System

Catalog No.: UM100PD 100 tests

The UnoVue Plus Mouse HRP/DAB Detection System is a polymer-based 1-step horseradish peroxidase-labeled detection system for immunohistochemistry. This kit can detect mouse IgG and IgM antibodies, with significantly lower background than biotin/avidin detection systems. The Mouse UnoVue Plus HRP/DAB Detection System can be used for manual staining or with any automated staining instrument. The working solution of Stable DAB/Plus is stable for a week, offering convenience and cost savings due to less hazardous waste generation. This species-specific detection system is particularly useful for multiplex immunohistochemical staining assays.

**Kit Contents:** Peroxidase Block, Anti-Mouse HRP Polymer, Stable DAB/Plus Buffer, Stable DAB/Plus Chromogen, and an empty mixing bottle for Stable DAB/Plus.

#### UnoVue Plus<sup>™</sup> Mouse/Rabbit HRP/DAB Detection System

Catalog No.: UMR100PD 100 tests
UMR1000PD 1000 tests

The UnoVue Plus Mouse/Rabbit HRP/DAB Detection System is a polymer-based 1-step horseradish peroxidase-labeled detection system for immunohistochemistry. These reagents detect antibodies raised in mouse and rabbit, simultaneously, with significantly lower background than biotin/avidin detection systems. This kit can detect mouse IgG, IgM and rabbit primary antibodies, both monoclonal and polyclonal. Reagents can be used for manual staining or with any automated staining platform. The working solution of Stable DAB/Plus is stable for a week, offering convenience and cost savings due to less hazardous waste generation.

**Kit Contents:** Peroxidase Block, Anti-Mouse/Rabbit HRP Polymer, Stable DAB/Plus Buffer, Stable DAB/Plus Chromogen, and an empty mixing bottle for Stable DAB/Plus.

#### UnoVue Plus™



#### Mouse on Mouse (MOM) HRP/DAB Detection System

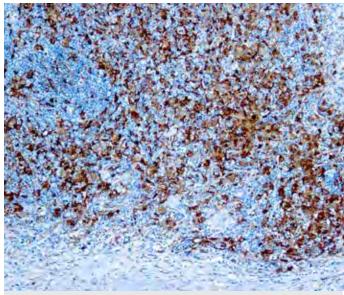
Catalog No.: MMU100PD 100 Tests

The UnoVue Plus Mouse on Mouse (MOM) HRP/DAB Detection System is a non-biotin, one-step detection system suitable for detecting mouse antigens on mouse tissue sections. The UnoVue Plus Detection System may be used with formalin-fixed paraffin embedded and cryostat sections, as well as blood smears, cytosmears, and cell preparations.

**Kit Contents:** Tissue Primer, Mouse on Mouse (MOM) Blocking Reagent, Mouse UnoVue Plus HRP Polymer, Stable DAB/Plus Buffer, Stable DAB/Plus Chromogen, Empty mixing bottle for Stable DAB/Plus.

## UnoVue Plus™ One Step Detection Components

UnoVue Plus One Step Detection components are developed by directly labelling immunoglobulins with enzymes using a proprietary tandem hyperlabelling technology. These non-biotin one-step detection components are highly suitable for demonstrating antigens in formalin-fixed paraffin-embedded tissues and cryostat sections.



Formalin fixed paraffin human tonsil stained with Fascin-1 (Mob496), with UnoVue Plus.

#### **UnoVue Plus<sup>™</sup> Mouse AP Detection Component**



IVD

Catalog No.: MU-AP100 100 Tests MU-AP1000 1000 Tests

UnoVue Mouse Plus AP Detection Component is a non-biotin one-step detection reagent suitable for demonstrating antigens in formalin-fixed paraffin-embedded tissues and frozen sections. The UnoVue Plus Detection Component may also be used with blood smears, cytosmears, and cell preparations.

Kit Contents: UnoVue Plus Mouse AP Detection Component

#### UnoVue Plus™

Mouse/Rabbit AP Detection Component

Catalog No.: MRU-AP100 100 Tests MRU-AP1000 1000 Tests

UnoVue Plus Mouse/Rabbit AP Detection Component is a non-biotin onestep detection reagent suitable for demonstrating antigens in formalinfixed paraffin-embedded tissues and cryostat sections. The UnoVue Plus Detection Component may also be used with blood smears, cytosmears, and cell preparations.

Kit Contents: UnoVue Plus Mouse/Rabbit AP Detection Component

#### UnoVue Plus™ Mouse HRP Detection Component (



Catalog No.: MU-HRP100 100 Tests MU-HRP1000 1000 Tests

UnoVue Plus Mouse HRP Detection Component is a non-biotin onestep detection reagent suitable for demonstrating antigens in formalinfixed paraffin-embedded tissues and frozen sections. The UnoVue Plus Detection Component may also be used with blood smears, cytosmears, and cell preparations.

Kit Contents: UnoVue Plus Mouse HRP Detection Component

#### UnoVue Plus™

#### Mouse/Rabbit HRP Detection Component

Catalog No.: MRU-HRP100 100 Tests MRU-HRP1000 1000 Tests

UnoVue Plus Mouse/Rabbit HRP Detection Component is a non-biotin one-step detection reagent suitable for demonstrating antigens in formalin-fixed paraffin-embedded tissues and frozen sections. The UnoVue Plus HRP Detection Component may also be used with blood

smears, cytosmears, and cell preparations. **Kit Contents:** UnoVue Plus Mouse/Rabbit HRP Detection Component

#### UnoVue Plus™ Rabbit AP Detection Component





Catalog No.: RU-AP100 100 Tests RU-AP1000 1000 Tests

UnoVue Plus Rabbit AP Detection Component is a non-biotin one-step detection reagent suitable for demonstrating antigens in formalin-fixed paraffin-embedded tissues and frozen sections. The UnoVue Plus Detection Component may also be used with blood smears, cytosmears, and cell preparations.

Kit Contents: UnoVue Plus Rabbit AP Detection Component

## Streptavidin Biotin Based Detection System

Diagnostic BioSystems offers immunostaining detection systems based on streptavidin/biotin technology. We offer convenient broad spectrum kits to detect both mouse and rabbit primary antibodies, and are available in ready-to-use formats.

KIT	TEST SIZE	CATALOG NO.
Peroxidase Mouse & Rabbit Kit (DAB Liquid)	1000 tests/100 tests	KP500L/KP50L
Peroxidase Mouse & Rabbit Kit*	1000 tests/100 tests	KP500/KP50
Alk. Phos. Mouse & Rabbit Kit (Fast Red)	1000 tests/100 tests	KA500F/KA50F
Alk. Phos. Mouse & Rabbit Staining Kit*	1000 tests/100 tests	KA500/KA50

<sup>\*</sup> These kits do not contain any substrate/chromogen

#### Ready-to-Use Kits Components

KIT COMPONENT	VOLUME	CATALOG NO.
Mouse & Rabbit Link	100ml	M006
HRP Label	100ml	M008
ALP Label	100ml	M010

# Chromogens

New discoveries in the clinic are demanding more functionality from IHC. Diagnostic BioSystems offers novel proprietary chromogens in Brown, Red, Green, Yellow and Blue for easy to develop multistains in your own lab. Use of high-quality, novel chromogens results in robust staining, making results reproducible and trustworthy.

- High Quality Staining—Detect and diagnose with confidence
- Broad Applicability—Single and Multiplex IHC and ISH
- Versatile and High Performance Reagents—HRP and AP compatible, well suited for manual and automation

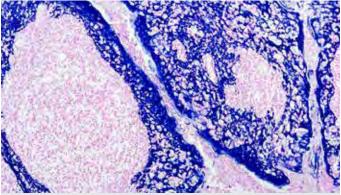
Diagnostic BioSystems provides chromogens with two commonly used enzyme labels:

Horse Radish Peroxidase (HRP) Alkaline Phosphatase (AP)

## Chromogens for AP

PermaBlue Plus/AP

Catalog No.: K058 K058-110 30ml Ready-to-Use 110ml Ready-to-Use

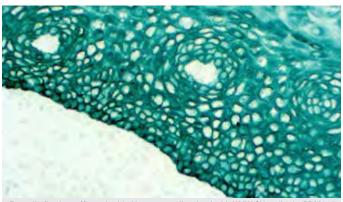


Formalin fixed paraffin embedded human tonsil stained with HMW CK antibody (PDM074) labeled with PermaBlue Plus/AP Chromogen (K058) produces a distinct bright blue color.

PermaBlue/AP is a substrate chromogen system for use with alkaline phosphatase (AP) detection in immunohistochemistry (IHC) or in situ hybridizations (ISH). PermaBlue Plus/AP has been reformulated to increase stability of the working solution while producing a distinct bright blue color. PermaBlue Plus/AP is insoluble in alcohol and xylene substitutes; therefore sections can be dehydrated in alcohol, cleared in xylene substitute, and permanently mounted.

PermaGreen Plus/AP

Catalog No.: K059 K059-110 30ml Ready-to-Use 110ml Ready-to-Use



Formalin fixed paraffin embedded human tonsil stained with HMW CK antibody (PDM074) labeled with PermaGreen Plus/AP Chromogen (K059) produces a strong green color.

PermaGreen Plus/AP is a substrate chromogen system for use with alkaline phosphatase (AP) detection in immunohistochemistry (IHC) or in situ hybridizations (ISH). PermaGreen Plus/AP has been modified to increase staining intensity, producing a strong green color that is insoluble in alcohol and xylene substitutes; therefore sections can be dehydrated in alcohol, cleared in a xylene substitute, and permanently mounted.

PermaRed/AP

(Alcohol & Xylene Compatible)

Catalog No.: K049 30ml Ready-to-Use

K049-110 110ml Ready-to-Use

PermaRed/AP is a substrate chromogen system for use with alkaline phosphatase (AP) detection in immunohistochemistry (IHC) or in situ hybridizations (ISH). PermaRed/AP produces a brilliant dark red color. PermaRed/AP is insoluble in organic solvents; therefore sections can be dehydrated in alcohol, cleared in xylene (or a xylene-substitute), and permanently mounted.

#### PermaRed/AP-Auto

For Use on Automated Staining Platforms

Catalog No.: K049-Auto 30ml Ready-to-Use K049-Auto-110 110ml Ready-to-Use

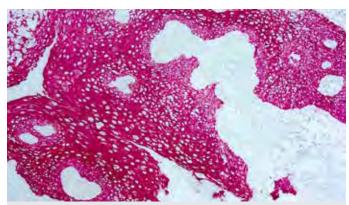
PermaRed/AP-Auto produces a red color, ranging from pink to brilliant darkred, depending on the signal intensity. It is insoluble in organic solvents; therefore sections can be dehydrated in alcohol, cleared in xylene (or a xylene-substitute), and permanently mounted.

PermaRed/AP-Auto has been formulated for on-slide mixing. The instrument should be programmed to apply the substrate-buffer to the slide followed by application of the chromogen reagent. The substrate-buffer and chromogen components are stable in their separate formats. They can be loaded into the reagent rack at the beginning of the staining run with the other reagents, for walk away convenience.

#### PermaRed/AP-AutoPlus

IVD

Catalog No.: K057-AutoPlus 30ml Ready-to-Use K057-AutoPlus-110 110ml Ready-to-Use



Formalin fixed paraffin embedded squamous cell carcinoma human tissue stained with CK 5/6 antibody (Mob362) labeled with PermaRed AutoPlus (K057) produces a brilliant red color.

PermaRed/AP-Auto/Plus produces a red color, ranging from pink to brilliant dark red, depending on the signal intensity. It is insoluble in organic solvents; therefore sections can be dehydrated in alcohol, cleared in xylene (or a xylene-substitute), and permanently mounted.

IVD

IVD

IVD

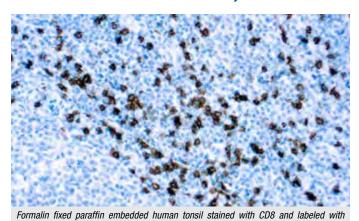
IVD

## Chromogens for HRP

DAB Auto

Catalog No.: K081-AUTO K081-AUTO-110

30ml Ready-to-Use 110ml Ready-to-Use

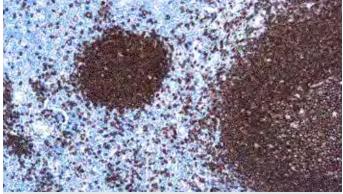


DAB, a widely used chromogen for immunoperoxidase staining, is well accepted among pathologists because of its high sensitivity and cleaner background than aminoethylcarbazole (AEC). Specimens stained in DAB can be dehydrated, cleared, and mounted for permanent record keeping. DAB Auto is more sensitive than traditional DAB and it is easier to prepare. Labs can prepare the volume they need, resulting in less wastage of reagents. It is Ideal for automated stainers with on-board mixing capabilities.

High Contrast DAB Catalog No.: K055

DAB Auto (K081).

200ml Ready-to-Use



Formalin fixed paraffin embedded human tonsil stained with CD20 antibody (PDM004) labeled with High Contrast DAB (K055) produces a dark chocolate brown color.

DAB, is a widely used chromogen for immunoperoxidase staining, and is well accepted among pathologists because of its increased sensitivity and decreased background when compared to amino ethylcarbazole (AEC). Specimens stained with DAB can be dehydrated, cleared, and permanently mounted. High Contrast DAB is more sensitive and stable than traditional working DAB solutions.

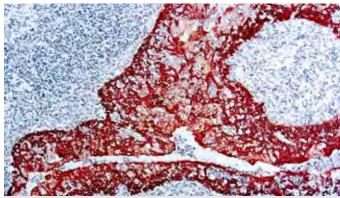
Mono AEC/Plus

IVD

IVD

Catalog No.: K050 K050-110

30ml Ready-to-Use 110ml Ready-to-Use



Formalin fixed paraffin embedded human tonsil stained with high molecular weight Cytokeratin H.M.W and labeled with Mono AEC/Plus (K050).

Mono AEC/Plus is a substrate chromogen system for use with horseradish peroxidase (HRP) detection in immunohistochemistry (IHC) or in situ hybridizations (ISH). AEC produces a red colored end product, yielding strong contrast when combined with a blue hematoxylin counterstain. AEC has been well accepted among histotechnologists because it is less chemically hazardous than DAB. Specimens stained using Mono AEC/Plus cannot be dehydrated in ethanol and must be mounted in an aqueous-based mounting medium such as CC/Mount (cat. K002).

PermaBlack/HRP

Catalog No.: K062 30ml Ready-to-Use K062-110 110ml Ready-to-Use



Formalin fixed paraffin embedded human adenocarcinoma stained with Cytokeratin H.M.W and labeled with PermaBlack/HRP(K062).

PermaBlack/HRPis a substrate chromogen system for use with horseradish peroxidase (HRP) detection in immunohistochemistry (IHC) or in situ hybridizations (ISH). PermaBlack/HRPcan be permanently mounted to produce a sharply contrasting ebony black color that can be easily distinguished from other stains.

PermaBlue/HRP

Catalog No.: K063 K063-110

30ml Ready-to-Use





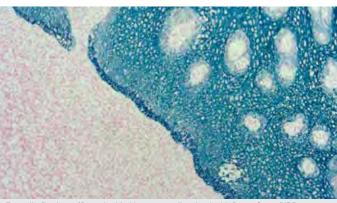
Formalin fixed paraffin embedded human tonsil stained with Cytokeratin H.M.W and labeled with PermaBlue/HRP(K063).

PermaBlue/HRPis a substrate chromogen system for use with horseradish peroxidase (HRP) detection in immunohistochemistry (IHC) or in situ hybridizations (ISH). PermaBlue/HRPcan be permanently mounted to produce a strong azure blue color that can be easily distinguished from other stains.

PermaGreen/HRP

30ml Ready-to-Use 110ml Ready-to-Use

Catalog No.: K074 K074-110



Formalin fixed paraffin embedded human tonsil stained with PermaGreen/HRP.

PermaGreen/HRP is a substrate-chromogen system designed to be used for either IHC or ISH when utilizing horseradish peroxidase. PermaGreen/HRP produces a distinct bright green color that can easily be distinguished from other stains.

PermaRed/HRP

IVD

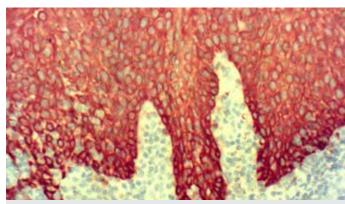
IVD

Catalog No.: K075 30ml Ready-to-Use

110ml Ready-to-Use K075-110

IVD

IVD

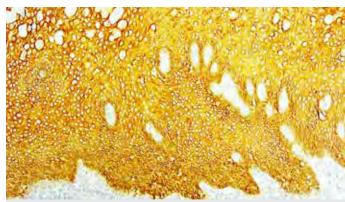


Formalin fixed paraffin embedded human tonsil stained with Cytokeratin H.M.W and labeled with PermaRed/HRP (K075).

PermaRed/HRP is a substrate-chromogen system designed to be used for either IHC or ISH when utilizing horseradish peroxidase. PermaRed/HRP produces a distinct brick red stain that can easily be distinguished from other stains.

PermaYellow/HRP

Catalog No.: K060 K060-110 30ml Ready-to-Use 110ml Ready-to-Use



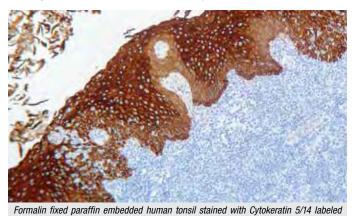
Formalin fixed paraffin embedded human tonsil stained with Cytokeratin H.M.W labeled with PermaYellow/HRP(K 060)

PermaYellow/HRPis a substrate chromogen system for use with horseradish peroxidase (HRP) detection in immunohistochemistry (IHC) or in situ hybridizations (ISH). PermaYellow/HRPproduces a distinct bright yellow that can easily be distinguished from other stains.

Stable DAB/Plus Catalog No.: K047

with Stable DAB/Plus (K047).

200ml Ready-to-Use



DAB, a widely used chromogen for immunoperoxidase staining, is well accepted among pathologists because of its high sensitivity and cleaner background than aminoethylcarbazole (AEC). Specimens stained in DAB can be dehydrated, cleared, and mounted for permanent record keeping. Stable DAB/Plus is more sensitive and stable than traditional working DAB solutions, which reduces hazardous waste generation.

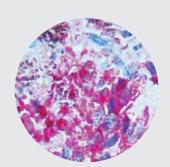


# Diagnostic BioSystems' Chromogens

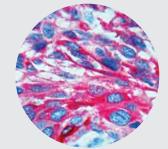
are available in a wide array of colors for both HRP and AP.

Visit us at dbiosys.com

# Improving Dermatologic Diagnosis with PermaRed/AP and PermaRed/HRP

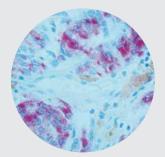


HMB45 melanoma utilizing PermaRed/AP

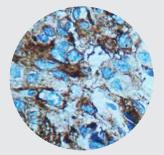


IVD

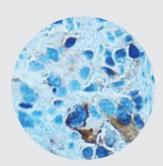
MART1 melanoma utilizing PermaRed/HRP



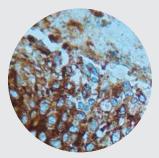
Pan Melanoma Cocktail on melanoma utilizing PermaRed/AP



HMB45 melanoma utilizing Stable DAB/Plus



MART1 melanoma utilizing Stable DAB/Plus



Pan Melanoma Cocktail on melanoma utilizing Stable DAB/Plus

# Antigen Retrieval

The Antigen Retrieval technique is a novel method for the recovery of antigens from formalin-fixed, paraffin-embedded tissue. It consists of heating tissue sections in the presence of an antigen retrieval solution. The quality of the staining result is largely dependent on strict adherence to the antigen retrieval protocol. If the antigens are incompletely retrieved, the staining is light and the background may be high. Epitope retrieval techniques fall into two main categories, enzyme induced epitope recovery and heat induced epitope recovery.

Diagnostic BioSystems offers products for both enzyme and heat induced epitope retrieval.

#### 10X Antigen Retrieval Buffer High, pH 10.0

IVE

#### Catalog No.: K044 500ml Concentrated

10X Antigen Retrieval Buffer High, pH 10.0 is designed for use during the heat induced epitope retrieval (HIER) step prior to immunohistochemistry on formalin-fixed paraffin embedded tissue sections. The use of this buffer in combination with heat (often by microwave, water bath, or pressure cooker) has been shown to restore the antigenicity of proteins modified during the formalin fixation of tissue. This buffer is supplied as a 10X stock solution.

#### 10X Citrate Buffer for

IVD

#### Heat Induced Epitope Recovery,pH 6.0

Catalog No.: K035 500ml Concentrated

10X Citrate Buffer For Heat Induced Epitope Recovery, pH 6.0 is designed for use during the heat induced epitope retrieval (HIER) step prior to immunohistochemistry on formalin-fixed paraffin embedded tissue sections. The use of this buffer in combination with heat (often by microwave, water bath, or pressure cooker) has been shown to restore the antigenicity of proteins modified during the formalin fixation of tissue. This buffer is supplied as a 10X stock solution.

#### 10X Citrate Buffer for

IVD

#### Heat Induced Epitope Recovery, pH 7.0

Catalog No.: K036 500ml Concentrated

10X Citrate Buffer For Heat Induced Epitope Recovery, pH 7.0 is designed for use during the heat induced epitope retrieval (HIER) step prior to immunohistochemistry on formalin-fixed paraffin embedded tissue sections. The use of this buffer in combination with heat (often by microwave, water bath, or pressure cooker) has been shown to restore the antigenicity of proteins modified during the formalin fixation of tissue. This buffer is supplied as a 10X stock solution.

#### 10X Citrate Buffer for

IVD

#### Heat Induced Epitope Recovery, pH 8.0

Catalog No.: K037 500ml Concentrated

10X Citrate Buffer For Heat Induced Epitope Recovery, pH 8.0 is designed for use during the heat induced epitope retrieval (HIER) step prior to immunohistochemistry on formalin-fixed paraffin embedded tissue sections. The use of this buffer in combination with heat (often by microwave, water bath, or pressure cooker) has been shown to restore the antigenicity of proteins modified during the formalin fixation of tissue. This buffer is supplied as a 10X stock solution.

#### 10X EDTA Buffer for

IVD

#### Heat Induced Epitope Recovery, pH 8.0

Catalog No.: K038 500ml Concentrated

10X EDTA Buffer For Heat Induced Epitope Recovery, pH 8.0 is designed for use during the heat induced epitope retrieval (HIER) step prior to immunohistochemistry on formalin-fixed paraffin embedded tissue sections. The use of this buffer in combination with heat (often by microwave, water bath, or pressure cooker) has been shown to restore the antigenicity of proteins modified during the formalin fixation of tissue. This buffer is supplied as a 10X stock solution.

### 10X Tris-EDTA Buffer For

IVD

### Heat Induced Epitope Recovery, pH 9.0

Catalog No.: K043 500ml Concentrated

10X Tris-EDTA Buffer For Heat Induced Epitope Recovery, pH 9.0 is designed for use during the heat induced epitope retrieval (HIER) step prior to immunohistochemistry on formalin-fixed paraffin embedded tissue sections. The use of this buffer in combination with heat (often by microwave, water bath, or pressure cooker) has been shown to restore the antigenicity of proteins modified during the formalin fixation of tissue. This buffer is supplied as a 10X stock solution.

#### HistoZyme

IVD

Catalog No.: K046 15ml Ready-to-Use

K046-50 50ml Ready-to-Use

HistoZyme is a proteolytic enzyme solution that results in superior staining over traditionally used enzyme pretreatments, such as pepsin and trypsin. HistoZyme requires only a brief incubation at room temperature. Performing antigen recovery with HistoZyme, will allow you to dilute the primary antibody 5 to 10 fold further and achieve optimal staining.

#### **Pepsin Solution**

IVD

Catalog No.: K009 50ml Ready-to-Use

Pepsin is used for proteolytic digestion of formalin-fixed paraffin-embedded (FFPE) tissue sections prior to application of antibodies. In immunohistochemistry (IHC), most commonly used fixatives such as formalin, mask tissue antigens (cellular, membrane, and nuclear) by their intrinsic crosslinking. This masking results in poor or no staining in IHC. Pepsin digestion of FFPE tissue sections improves accessibility of antibodies to tissue antigens.



IVD

IVD

#### Proteinase K 25X

Catalog No.: K030 2ml Concentrated

Proteinase K is specifically formulated to achieve proteolytic digestion of formalin fixed, paraffin embedded tissue sections prior to performing in situ hybridization procedures.

#### **QuatroSol I 10X Citrate Buffer**

נוטסטוו וטא טונומנכ טעווכו

Catalog No.: K085 500ml Concentrated

The Antigen Retrieval technique is a novel method for the recovery of antigens from formalin-fixed, paraffin-embedded tissue. It consists of heating tissue sections in the presence of an antigen retrieval solution. The quality of the staining result is largely dependent on strict adherence to the antigen retrieval protocol. If the antigens are incompletely retrieved, the staining is light and the background may be high.

#### Buffer performs four steps:

- 1. Deparaffinition
- 2. Rehydration
- 3. Antigen retrieval
- 4. Blocks endogenous peroxidase and alkaline phosphatase simultaneously it can eliminate the use of alchohol and xyelene in deparaffinization process. It is cost effective and less hazardous.

#### QuatroSol II 10X Tris EDTA Buffer

Catalog No.: K086 500ml Concentrated

The Antigen Retrieval technique is a novel method for the recovery of antigens from formalin-fixed, paraffin-embedded tissue. It consists of heating tissue sections in the presence of an antigen retrieval solution. The quality of the staining result is largely dependent on strict adherence to the antigen retrieval protocol. If the antigens are incompletely retrieved, the staining is light and the background may be high.

#### Buffer performs four steps:

- 1. Deparaffinition
- 2. Rehydration
- 3. Antigen retrieval
- 4. Blocks endogenous peroxidase and alkaline phosphatase simultaneously it can eliminate the use of alchohol and xyelene in deparaffinization process. It is cost effective and less hazardous.

IVD

## Montage Opus<sup>™</sup> Antigen Retrieval SYSTEM

Diagnostic BioSystems offers a compact and efficient platform for Heat Induced Epitope Retrieval (HIER). Heat induced epitope retrieval pretreatment is a common practice in immunohistochemistry to improve the quality of staining by modifying the molecular conformation of 'target' proteins through exposure of slide-mounted tissue specimen to a heated buffer solution. Appropriate use of heat and pressure along with suitable buffer solutions is of extreme importance for consistent immunohistochemistry staining.

### **DBS Montage Opus SYSTEM Benefits**

- Ensures crisp and clean staining
- Provides consistent and reliable results
- Increases staining efficiency
- Offers 72 Slide Staining Capacity

### DBS Montage Opus SYSTEM-What is Included

Each Montage Opus Unit includes:

- 3-Plastic Slide Dishes
- 3-24 Slide Rack
- 1-Metal Stand
- 1-Montage 10X EDTA AR Solution (Cat No: K038-500AN)
- 1-Montage 10X Citrate AR Solution (Cat No: K035-500AN)
- 2-Temperature Indicating Strips (Cat No: AR360-10TS)

## DBS Montage Opus SYSTEM Specifications

Color	Black
Electrical	120V
Slide Capacity	72 slides / run

Montage Opus

#### **ORDERING INFORMATION**

**PRODUCT NAME** 

Montage Opus Antigen Retrieval system

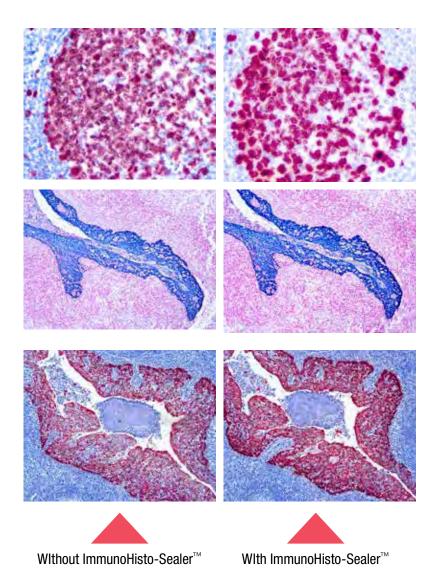
CATALOG NO.

AR360

## ImmunoHisto-Sealer™

This product is designed for tissue specimens stained with peroxidase, alkaline phosphatase-based systems and various chromogens. After treating with ImmunoHisto-Sealer™, alcohol and Xylene soluble chromogens can be mounted in Permanent Mounting Media.

ImmunoHisto-Sealer<sup>™</sup>
For In Vitro Diagnostic Use
Patented Technology: US 10,495,553B2



### Advantages of ImmunoHisto-Sealer™

- Improves the tissue morphology
- Improves your stain over an extended period of time
- Applied to the stained section, specimens are permanently mounted without chromogens fading
- Saves hands on time when mounting slides
- Avoids use of toxic chemicals such as xylene and eliminates accumulation of hazardous waste
- Three-year storage

#### **ORDERING INFORMATION**

PRODUCT NAME
ImmunoHisto-Sealer™

CATALOG NO.

nunoHisto-Sealer"

K076

# **Ancillary Reagents**

#### Alkaline Phosphatase Enhancer

Catalog No.: K011 250ml Ready-to-Use

Alkaline phosphatase, an enzyme derived from bovine intestinal mucosa, is often used as a label for in situ hybridization and immunohistochemistry. Detection of this enzyme requires the generation of an insoluble colored reaction end product. DBS has introduced a new stable solution to increase the signal generated by alkaline phosphatase several fold.

#### **Broad Spectrum Negative Control**

IVD

Catalog No.: K053-06

6ml Ready-to-Use K053-25 25ml Ready-to-Use

K053-100 100ml Ready-to-Use

Negative controls are used to determine the specificity of an antibody. No staining should be observed when the primary antibody is omitted. This product is specifically designed to work with rabbit, mouse and goat antibodies. The Broad Spectrum Negative Control has been titered to work with Polymerbased Secondary Systems in manual and automated IHC platforms.

#### **DAB Away Kit**

IVD

Catalog No.: K072-500AN 500ml

Montage DAB Away removes diaminobenzidine (DAB) stains and precipitate from surfaces. Contamination with DAB residue can be a problem that may affect staining quality or automated immunohistochemistry stainers. Bleach will only reduce the color intensity of DAB stains, whereas, DAB Away removes the residual DAB stain that may clog instrument probes and tubing. This kit can also be used to clean glassware used in the lab that has been exposed to DAB and has retained DAB stains even after normal cleaning.

#### DP3 for One-Step Deparaffinization

IVD

Catalog No.: K082

The DP3 reagent is used for deparaffinization of paraffin-embedded tissue sections. Deparaffinization is completed in a single step without the use of xvlene or alcohol. After deparaffinization the tissue sections can be transferred directly into antigen retrieval solution.

#### Elite PAP Pen

IVD

Catalog No.: K039 1 Pen Each

Elite PAP pen is a special marking pen that provides a thin film-like greentinged hydrophobic barrier when a circle is drawn around a specimen on a slide. This water repellent barrier keeps staining reagents localized on the tissue sections, prevents mixing of reagents when differentially staining two sections on the same slide, and allows use of less reagents per section. Insoluble in alcohol and acetone, PAP Pen markings can be optionally removed with xylene after the staining procedure is complete.

#### Elite Mini PAP Pen

IVD

Catalog No.: K042

1 Pen Each

Elite Mini PAP pen is a special marking pen that provides a thin filmlike green-tinged hydrophobic barrier when a circle is drawn around a specimen on a slide. This water repellent barrier allows use of less reagents per section. Insoluble in alcohol and acetone, PAP Pen markings can be optionally removed with xylene after the staining procedure is complete. The Mini PAP pen is especially useful when working with multiple sections on a single slide because its tip is finer than the regular PAP pen.

#### FITC Diluent

IVD

Catalog No.: FD001

This product can be used as a diluent to prepare primary antibodies conjugated to FITC. It can be used with any primary antibody irrespective of its source of origin. FITC Diluent is specifically designed to stabilize primary antibodies and reduce nonspecific background staining observed during immunostaining.

#### Hematoxylin

Catalog No.: K056-100AN 100ml

Hematoxylin is a histological staining reagent suitable for visualization of nuclei in tissue sections.

#### **Primary Antibody Diluent**

IVD

(With Background Reducing Component)

Catalog No.: K004 250ml Ready-to-Use

The Primary Antibody Diluent contains optimal concentrations of sodium chloride and detergents to prevent nonspecific binding and enable better penetration of primary antibodies. Primary Antibody Diluent is specifically designed for diluting primary antibodies for immunohistochemistry. Both, monoclonal and polyclonal antibodies can be diluted in this buffer.

#### TissueBond™ Reagent

IVD

Catalog No.: K013

7ml Ready-to-Use

Proper tissue adhesion to the glass slides is critical in the immunostaining process. Improper adhesion of tissue sections can lead to poor quality staining or even loss of tissue sections during the process of immunostaining. White glue, albumen, chrome-gelatin and poly-L-lysine have been used as tissue adhesives; however, they can increase the background during the staining process. Since epitope recovery may require harsh treatment with proteolytic enzymes, microwave treatment or treatment with saponin etc., there is a need for a tissue adhesive which can irreversibly bind tissue sections to the glass without creating any background. Glass treated with TissueBond can be used for both paraffin as well as frozen tissue sections.

#### Tween 20

IVD

Catalog No.: K067-125AN 125ml

Tween 20 is a detergent (surfactant) commonly added to buffers and reagents for immunohistochemistry. Its purpose is to decrease background staining and enhance reagent spreading in automated and manual procedures.

### **Blockers**

#### **Background Blocker**

IVD

Catalog No.: K023 1

100ml Ready-to-Use

Background Blocker is a unique serum-free blocking solution used to reduce nonspecific background during immunostaining techniques. Background Blocker is a universal blocking agent, eliminating the need for matching species with the link antibody. This blocking reagent has been shown to be superior to serum-based blocking solutions. Background Blocker can be used for ELISA and Western blotting techniques as well as immunohistochemistry.

#### Mouse on Mouse Blocking Reagent

IVE

Catalog No.: K065

10ml

Mouse on Mouse (MOM) Blocking Reagent is a unique serum-free blocking solution used to reduce nonspecific background staining from mouse antibodies. This blocking reagent has been shown to be more superior than serum-based blocking solutions.

#### Peroxidase Block

IVD

Catalog No.: K033 50ml Ready-to-Use

Endogenous peroxidase activity has been observed in tissue sections during immunoperoxidase staining. If not properly suppressed, endogenous peroxidase can produce false signal as well as high background during the immunostaining. Treatment of tissue sections with Peroxidase Block prior to the application of primary antibody will suppress endogenous peroxidase activity.

#### **Tissue Primer**

IVD

Catalog No.: K054 100ml

Tissue Primer is a universal enzyme blocking reagent to use in horse radish peroxidase (HRP) and alkaline phosphatase (AP) based immunohistochemical staining procedures done on paraffin tissue sections, frozen tissue sections and cell smears to suppress nonspecific staining due to endogenous enzyme activity.

## Diagnostic BioSystems Offers A Host Of Ancillaries

to provide solutions to your IHC staining challenges.

Visit us at dbiosys.com

## Chromogen Enhancers

20X DAB Enhancer

IVD

Catalog No.: K012

10ml Concentrated

DAB is a widely used chromogen for immunoperoxidase staining and immunoblotting. DAB gives cleaner background than aminoethylcarbazole (AEC). Specimens stained in DAB can be dehydrated in ethanol and cleared in xylene and can be mounted for permanent record keeping. Strength of signal generated during the immunostaining is the key to a good staining. The reagent is a stable liquid solution which increases the staining intensity of specimens stained with DAB several-fold, thereby increasing the efficiency of detection.

#### ImmunoHisto-Sealer™

IVD

Catalog No.: K076

30ml

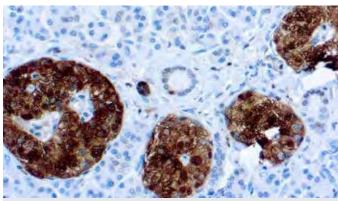
ImmunoHisto-Sealer is a preservation solution that acts as a sealant to improve tissue morphology and stain over an extended period of time. When applied to the stained section, specimens can be permanently mounted without chromogens fading. Additional benefits of the ImmunoHisto-Sealer™ include: saves hands on time when mounting slides, avoids the use of toxic chemicals such as xylene and eliminates accumulation of hazardous waste.

#### Intensi/Fire

IVD

Catalog No.: K045

15ml Ready-to-Use



Formalin fixed paraffin embedded human tonsil stained with Cytokeratin labeled with DAB and enhanced using Intensi/Fire.

One of the hallmarks of successful IHC is the strength of the signal generated during immunostaining. DAB, widely used as a chromogen for immunoperoxidase staining, has been well accepted by pathologists due to its superior performance compared to amino ethylcarbazole (AEC). Tissue specimens stained with DAB show increased staining intensity when Intensi/Fire is applied. Only a brief incubation is required. Increased sensitivity of the detection system allows the cost-effective option of diluting the primary antibody 5 to 10 fold. Intensi/Fire increases the signal intensity without creating background staining.

### **Buffers**

#### 10X Immuno Wash Buffer

IVD

Catalog No.: K005

1 Liter Concentrated

10X Immuno Wash Buffer works well for manual and automated immunohistochemistry applications as well as other laboratory procedures requiring a high quality TBS buffer with superior pH stability. The TBS contains surfactant and allows for reagents to spread more uniformly across tissue section on slides. It can also be used on an automated staining system.

#### 40X Immuno Wash Buffer

IVD

Catalog No.: K080

250 ml Concentrated

40X Immuno Wash Buffer washes and removes excess reagents during immunostaining. It works well for manual and automated immunohistochemistry applications as well as other laboratory procedures requiring a high quality TBS buffer with superior pH stability. The TBS contains surfactant and allows for reagents to spread more uniformly across tissue section on slides.

#### Phosphate Buffered Saline Tablets

IVD

Catalog No.: DMRE404-01 100 each Tablets

PBS buffer works well for manual and automated histopathology and immunohistochemistry (IHC) applications with the addition of a surfactant.

## Mounting Media

CC/Mount™

IVD

Aqueous Permanent Mounting Medium

Catalog No.: K002

30 ml Ready-to-Use

K002-200 200ml Ready-to-Use

CC/Mount is an aqueous mounting medium with a high refractive index. When applied to stained tissue sections, specimens can be permanently mounted without chromogens fading. The advantages of CC/Mount include: no coverslip, no exposure to organic fumes, permanent storage of slides and high resolution of tissue specimens. CC/Mount is compatible with chromogens like AEC, DAB, Fast Red, BCIP/NBT, BCIP/INT and fluorescent dyes like FITC and phycobiliproteins. The high pH ensures increased stability of fluorescence.

Fluoromount™

IVD

Catalog No.: K024 25ml Ready-to-Use

K024-200 200ml Ready-to-Use

Fluoromount is an innovative, aqueous-based mounting medium designed especially for the permanent preservation of fluorescent specimens. Fluoromount is to be used with tissue sections stained with a multitude of fluorescent dyes. This product is compatible with FITC, phycoerythrin, phycocyanin and allophycocyanin. It can also be used with other fluorescent markers such as Texas Red and rhodamine.

Fluoromount/Plus™

IVD

Catalog No.: K048

25ml Ready-to-Use

Fluoromount/Plus is an innovative, aqueous-based mounting medium designed especially for the permanent preservation of fluorescent specimens. Fluoromount/Plus is to be used with tissue sections stained with a multitude of fluorescent dyes. This product is compatible with FITC, phycoerythrin, phycocyanin and allophycocyanin. It can also be used with other fluorescent markers such as Texas Red and rhodamine.damine.



#### **Antigen Retrieval Solutions**



#### **Mounting Media**



#### **Pens**



**Buffers** 

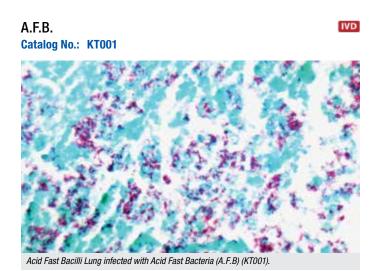
# Special Stains

Histology is the study and analysis of structure and function in biological tissues and cells. Specially formulated dyes and chemicals are used to give color to cellular tissue components for microscopic examination. Through this process diagnostic evaluations are made and patient therapies are determined.

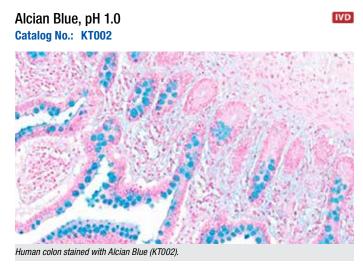
Diagnostic BioSystems offers Special Stains ranging from Acid-Fast Bacteria Stain Kit to Warthin-Starry Stain Kit. The reagents are packaged for optimal staining quality and are designed to be used right of the box for minimal set up time.

Each Diagnostic BioSystems Special Stain Kit has been quality assured and comes with complete instructions for use.

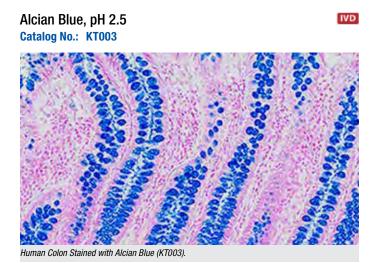
FORMAT AND PACK SIZE: Each kit has sufficient reagents for 100 tests.



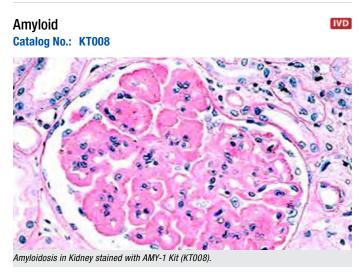
This kit stains acid-fast bacteria and tubercle bacilli of Mycobacterium genus in paraffin tissue sections. Tubercle bacilli and other acid-fast bacteria stain bright red and the background stains light green.



This kit stains strongly sulfated mucosubstances. Strongly sulfated mucosub-stances stain blue in paraffin tissue sections, while the nuclei stain pink to red and the cytoplasm and background stain pale pink.



This kit stains acid mucins, carboxylated and sulfated mucosubstances (except strongly sulfated mucosubstances) in paraffin tissue sections. Acidic mucins, carboxylated and sulfated mucosubstances stain blue, while the nuclei stain pink to red and the cytoplasm and background stain pale pink.



This kit stains amyloid deposits in paraffin tissue sections. The amyloids stain pale pink to red, while the nuclei stain blue.

## Colloidal Iron Catalog No.: KT007

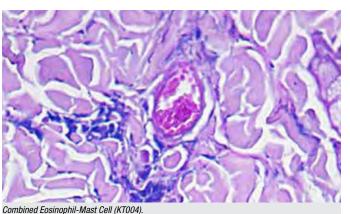


IVD

Human intestine stained with Colloidal Iron stain (KT007).

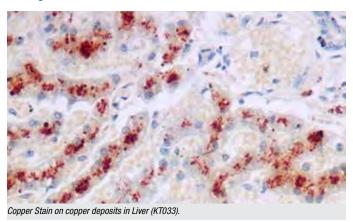
This kit stains acid mucopolysaccharides in paraffin tissue sections. The acid mucopolysaccharides stain bright blue, while collagen stains shades of red.

#### Combined Eosinophil-Mast Cell Catalog No.: KT004



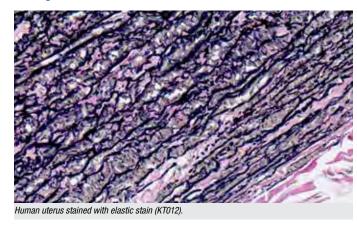
This kit stains eosinophils and mast cells imultaneously in paraffin tissue sections. Mast cells stain bright blue, while eosinophils stain bright red.

#### Copper Catalog No.: KT033



This kit stains copper deposits in paraffin tissue sections. The copper deposits stain light brown to red, while the nuclei stain blue.

**Elastic** Catalog No.: KT012

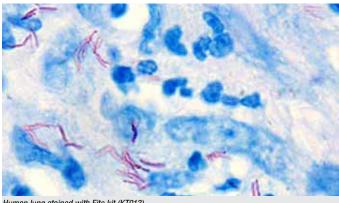


This kit stains elastic fibers in paraffin tissue sections. The elastic fibers stain black and collagen stains red, while the other tissue stains yellow.

#### **Fite** Catalog No.: KT013

IVD

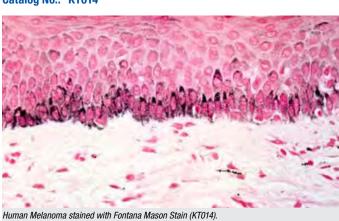
IVD



Human lung stained with Fite kit (KT013).

This kit stains Lepra bacillus in paraffin tissue sections. The Lepra bacillus stains red, while the background stains blue.

#### Fontana-Masson Catalog No.: KT014



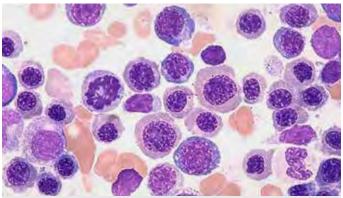
This kit stains argentaffin cells and melanin in paraffin tissue sections. The argentaffin cells and melanin granules stain brown to black, while the nuclei stain pink.



IVD

IVD

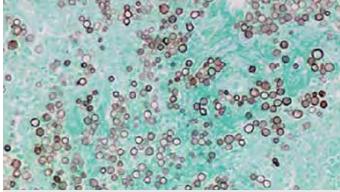
Giemsa Catalog No.: KT016



Human bone marrow stained with Giemsa kit (KT016).

This kit stains bone marrow cells, Helicobacter pylori, mast cells and certain microorganism in paraffin tissue sections. The erythrocytes stain gray, yellow or pink, H. pylori stain blue, mast cells stain dark blue with red granules, nuclei stain blue to violet and the cytoplasm stains light blue.

G.M.S. Catalog No.: KT015

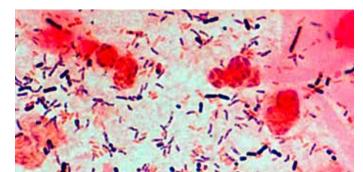


Human lung stained with G.M.S. kit (KT015).

This kit stains fungi and Pneumocystis carinii in paraffin tissue sections. The fungi and Pneumocystis carinii stain gray to black, while the background stains green.

Gram
Catalog No.: KT018

IVD



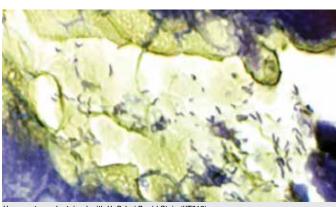
Graom positive and gram negative bacteria stained with Gram stain (KT018).

This kit stains Gram-positive and Gram-negative bacteria in paraffin tissue sections. The Gram-positive bacteria stain blue, Gram-negative bacteria stain red, while other tissues and the nuclei stain yellow and red respectively.

H.Pylori Rapid Stain Catalog No.: KT019



IVD

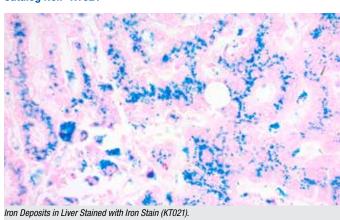


Human stomach stained with H. Pylori Rapid Stain (KT019).

This kit stains Helicobacter pylori bacteria in paraffin tissue sections. The Helicobacter pylori stain blue while the background stains pale blue.

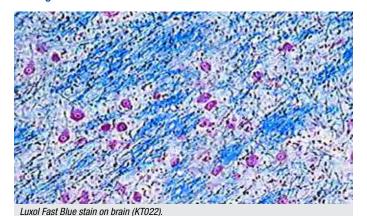
Iron Stain
Catalog No.: KT021





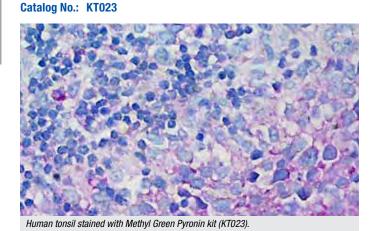
This kit stains ferric iron in paraffin tissue sections. The iron deposits stain blue, while the nuclei and other tissue stain red and pink respectively.

IVD **Luxol Fast Blue** Catalog No.: KT022



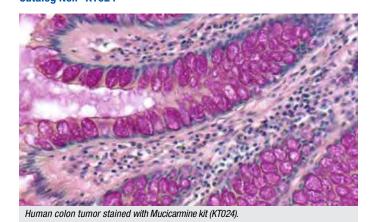
This kit stains myelin sheath and Nissl substance in paraffin tissue sections. The myelin fibers stain blue to greenish blue, while the cells stain pink to violet.

IVD **Methyl Green Pyronin** 



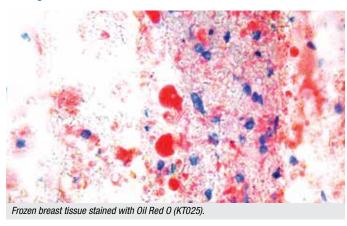
This kit stains DNA and RNA in paraffin tissue sections. The DNA stains blue-green to green and RNA stains pink to red.

IVD Mucicarmine Catalog No.: KT024



This kit stains epithelial mucins in paraffin tissue sections. The epithelial mucin stains pink to red, while the nuclei stain blue.

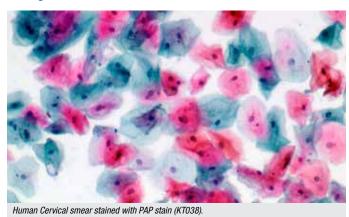
Oil Red O Catalog No.: KT025



IVD

This kit stains fat cells and neutral fat in frozen tissue sections. The fat cells and neutral fat stains red, while the nuclei stain blue.

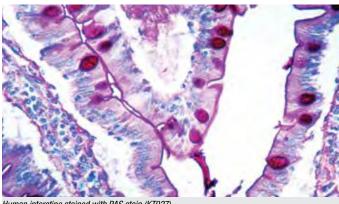
Papanicolaou Stain Catalog No.: KT038



The Papanicolaou (PAP) Stain Kit is designed to differentiate between

a variety of cells in vaginal smears for detection of vaginal, uterine and cervical cancer.

IVD P.A.S. Catalog No.: KT027

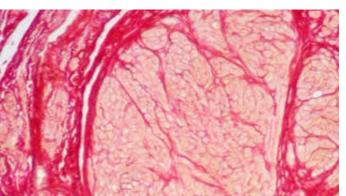


Human interstine stained with PAS stain (KT027).

This kit stains fungi, glycogen and mucin in paraffin tissue sections.s The basement membrane, fungi, glycogen and mucin stain pink to red, while the nuclei and other tissue stain blue and green respectively.

Picro Sirius Red Stain

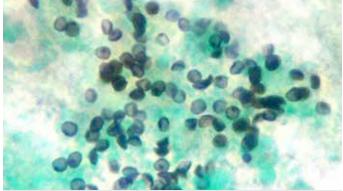
Catalog No.: KT037



Human uterus stained with Pirco Sirius Red (KT037).

The Picro-Sirius Red Stain Kit (For Collagen) is intended for use in the histological visualization of collagen I and III fibers in addition to muscle in tissue sections.

**Pneumocystis** Catalog No.: KT030



Pneumocystis Stain Kit on pneumocystis in Lung (KT030).

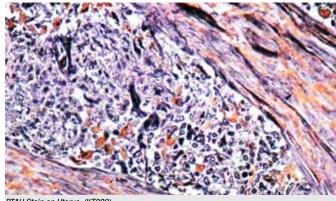
This kit stains Pneumocystis carinii in cytology smears as well as paraffin tissue sections. The Pneumocystis carinii stains violet to purple and the connective tissue stains blue to green.

P.T.A.H.

IVD

IVD

Catalog No.: KT029



PTAH Stain on Uterus (KT029).

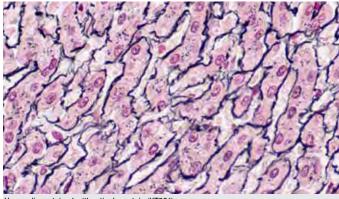
This kit stains collagen, fibrin and striated muscle in paraffin tissue sections. The collagen stains brownish red to red, fibrin and muscle stain blue, while the nuclei stain dark blue.

Reticulum

IVD

IVD

Catalog No.: KT031



Human liver stained with reticulum stain (KT031).

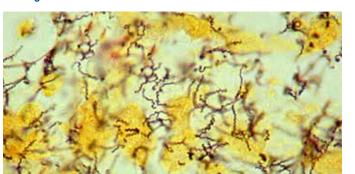
This kit stains reticulum fibers in paraffin tissue sections. The reticulum fibers stain gray to black, while the nuclei and background stain pink to rose.

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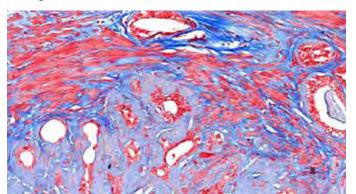
Steiner Catalog No.: KT035



Human breast stained with Steiner kit (KT035) showing Treponema pallidum staining.

This kit stains fungi, Helicobacter pylori, Legionella pneumophila and Spirochetes in paraffin tissue sections. The cat scratch fever, Legionella pneumophila stain dark brown, Spirochetes, Helicobacter pylori and funvgi stain black, while the background stains yellow, tan or brown.

Trichrome Stain Catalog No.: KT034



Massons Trichrome Stain on Lung Tissue (KT034).

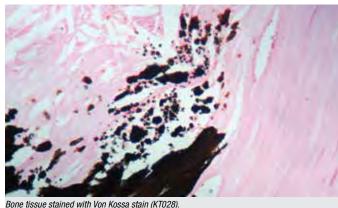
This kit stains collagen and muscle in paraffin tissue sections. The muscle and intercellular fibers stain red, while the nuclei and collagen stain black and blue respectively.

Von Kossa

IVD

IVD

Catalog No.: KT028



This kit stains calcium deposits in paraffin tissue sections. The calcium deposits stain black, while the nuclei and cytoplasm stain red and pink respectively.

Warthin-Starry Catalog No.: KT036



IVD



Human Gastric tissue stained with Warthin Starry kit (KT036).

This kit stains Helicobacter pylori, Spirochetes, Legionella pneumophila and cat scratch fever bacteria in paraffin tissue sections. Helicobacter pylori, Legionella pneumophila stain dark brown, while Spirochetes and cat scratch fever bacteria stain black.

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