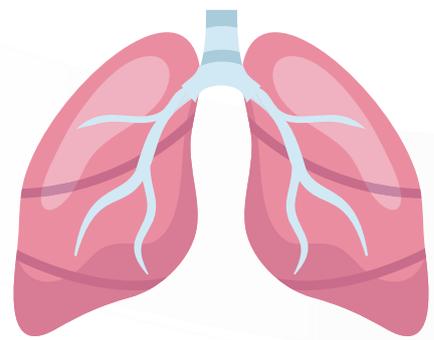


# IHC PANEL MARKERS

## L u n g   C a n c e r



BioGenex offers wide-ranging antibodies for several IHC panel for initial differentiation, tumor origin, treatment methods, and prognosis. All BioGenex antibodies are validated on human tissues to ensure sensitivity and specificity. BioGenex comprehensive IHC panels include a range of mouse monoclonal, rabbit monoclonal, and polyclonal antibodies to choose from.

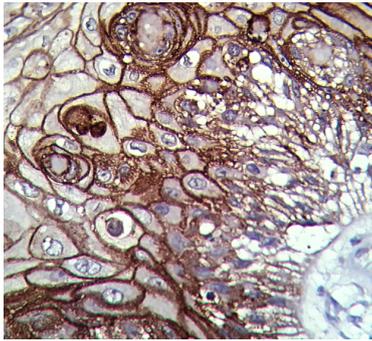
BioGenex offers a vast spectrum of high-quality antibodies for both diagnostic and reference laboratories. BioGenex strives to support efforts in clinical diagnostics and drug discovery development as we continue to expand our antibody product line offering in both ready-to-use and concentrated formats for both manual and automation systems.

### **Antibodies for Lung Cancer**

Desmoglein-3, CD35, HIF-2, TTF1, p63, CK5, CK6, CK7, CK20, CEA, CK19, Napsin-A, Calretinin, PD1, PD-L1, CK Pan, Neurofilament, ALK/p80, CD34, MPO, EGFR, E-Cadherin, Epcam, Melan-A, p53, SOX2, TAG-72, Vimentin, chromogranin A, synaptophysin, CD56, ALDH1A1, SFTPD



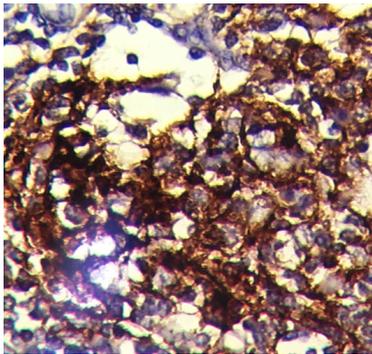
## Desmoglein-3



Desmoglein-3 (Dsg3), also known as Cadherin family member 6 (CDHF6), is a member of the desmosomal cadherin family and plays a critical role in cell-cell adhesion. It is a calcium-binding transmembrane glycoprotein component of desmosomes in vertebrate epithelial cells. DSGs/ desmocollin (DSCs) are anchored to the intracellular plaque proteins plakoglobin, plakophilins, and desmoplakin, the latter of which mediates connection to the intermediate filament cytoskeleton. Desmoglein 3 is predominately expressed in stratified squamous epithelia including epidermis, tongue, tonsil, esophagus and carcinomas. The Desmoglein 3 antibody has been cited as a superior marker for Lung Squamous Cell Carcinomas, and helps distinguish lung squamous cell carcinoma cases from lung adenocarcinomas. Studies have also shown that a panel consisting of Desmoglein-3 utilized with Napsin A can be a useful immunohistochemical marker for differentiation of lung squamous cell carcinoma and adenocarcinomas from other subtypes.

Antibody	Clone	Localization	Catalog Family
Desmoglein-3	DSG3/2839	Membrane	AMA77, AXA77, MUA77

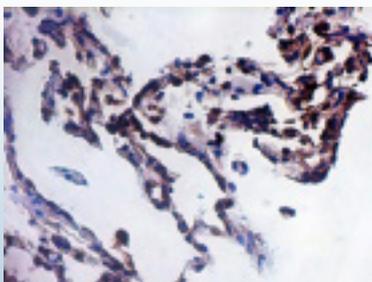
## CD35



CD35, also known as complement receptor 1 (CR1), is a 220-300 kDa N-glycosylated member of the RCA (regulators of complement activation) family of proteins. It is a cell membrane-bound, monomeric glycoprotein and its primary function is act as the receptor for complement components C3b and C4b, and it mediates the phagocytosis by neutrophils and monocytes of particles coated with C3b or C4b. CD35 binds and internalizes particles and immune complexes that are opsonized with MBL or complement components C3b, C3i, C4b, or C1q. CD35 additionally protects the cell from complement-mediated lysis by serving as a cofactor for Factor I and inhibiting the C3 and C5 convertases. CD35 is expressed on granulocytes, monocytes, B cells, some NK cells and erythrocytes. CD35 labels follicular dendritic cells of normal and neoplastic origin and is, thus, a useful marker for follicular dendritic cell sarcoma.

Antibody	Clone	Localization	Catalog Family
CD35	To5	Membrane	AMA78, AXA78, MUA78

## HIF-2

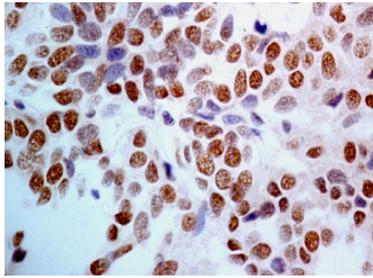


HIF-2-alpha (also known as EPAS1) is a transcription factor involved in the induction of genes regulated by oxygen. It shares 48% sequence identity with HIF1-alpha (HIF1A). Like HIF1A, HIF-2-alpha regulates gene expression in response to hypoxia. It also regulates the vascular endothelial growth factor (VEGF) expression and seems to be implicated in the development of blood vessels and the tubular system of the lungs. HIF2A is expressed at relatively higher levels in villus sections of placenta and in lung samples.

Antibody	Clone	Localization	Catalog Family
HIF-2	Polyclonal	Membrane/Cytoplasm	ARB28, AWB28, PUB28



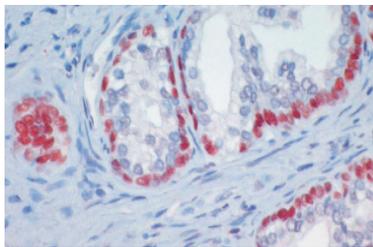
## TTF1



Thyroid Transcription Factor-1 (TTF-1), also known as thyroid-specific enhancer-binding protein (T/EBP), is a 40 kD protein that is a member of NKx2 family of homeodomain transcription factors that regulates the expression of thyroid- and lung-specific genes. It is a very selective marker for adenocarcinomas of lung and thyroid origin. Nuclear localization of this protein is seen in the epithelial cells of thyroid gland and lung. The anti-TTF-1 antibody is a useful tool for differentiating pulmonary adenocarcinoma from metastatic breast carcinoma and mesothelioma.

Antibody	Clone	Localization	Catalog Family
TTF1	SP141	Nucleus	AN887, AY887, NU887

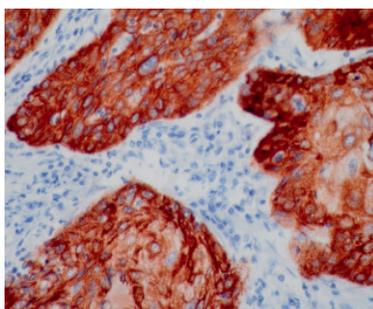
## p63



This antibody will detect all isoforms of p63 since the epitope is within the DNA binding domain. The p63 protein is a member of the p53 family, which also includes p73. p63 protein is detected in proliferating cells of epithelium, cervix, urothelium and prostate. This antibody is useful to differentiate the Squamous cell carcinoma of lung.

Antibody	Clone	Localization	Catalog Family
p63	4A4	Nucleus	AM418, AX418, MU418

## Cytokeratin 5

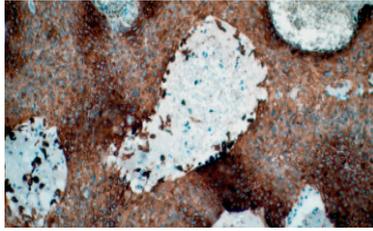


The mitotically active basal layers of most stratified squamous epithelia express 10% to 30% of their total protein as keratin. The two keratins specifically expressed in these cells are the type II keratin CK5 and its corresponding partner, type I keratin CK14, both of which are essential for the formation of 8-nm filaments. CK5 and calretinin have been useful in different studies as immunohistochemical markers suggestive of mesothelioma, and their expression is analyzed for the histological differential diagnosis with adenocarcinomas, especially when confronting with metastatic tumors of unknown origin. CK5 labels myoepithelial cells of breast and prostate basal cells. A cocktail of CK5, CK14 and p63, has been used as sensitive and specific basal cell marker of basal-like phenotype of breast carcinoma and to differentiate normal and prostate cancer. Loss-of-function mutations in the keratin 5 gene (KRT5) affected family members and in six unrelated patients with Dowling-Degos disease (DDD), an autosomal dominant genodermatosis. CK5 can be use a indicator of Squamous cell carcinoma.

Antibody	Clone	Localization	Catalog Family
Cytokeratin 5	EP42	Cytoplasm	AN853, AY853, NU853
Cytokeratin 5	EP24	Cytoplasm	AN847, AY847, NU847



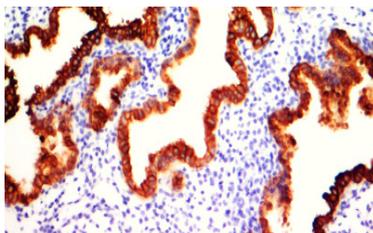
## Cytokeratin 6



The human type II Cytokeratin 6 (CK6; 56 kDa) is well known for its strong induction in stratified epithelia that feature an enhanced cell proliferation rate or abnormal differentiation during wound healing, in several diseases (e.g. psoriasis, actinic keratosis) and in cancer. CK6 is expressed on stratified epithelia including oral mucosa, esophagus, basal layer of epidermis, the outer root sheath of hair follicles, and in glandular epithelia. CK6 is a marker of hyperproliferative and activated keratinocytes found in psoriasis. CK6 paired with CK5 is useful to differentiate mesothelioma (positive) from lung carcinoma (negative) or metastatic carcinoma (negative) in the pleura. CK5/6 has also been used to distinguish usual ductal hyperplasia of the breast (strong staining) from solid papillary DCIS (negative) and as indicator of Squamous cell carcinoma.

Antibody	Clone	Localization	Catalog Family
Cytokeratin 6	EP67	Cytoplasm	AN845, AY845, NU845

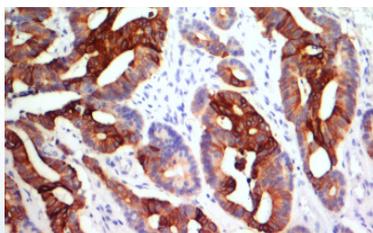
## Cytokeratin 7



Cytokeratin 7 is a 54 kD marker of simple epithelium. Antibody to Cytokeratin 7 strongly stains all cell layers of the urinary bladder transitional epithelium. However, Cytokeratin 7 is absent from gastrointestinal epithelium, hepatocytes, proximal and distal tubules of the kidney, and myoepithelium, and also cannot be detected in the stratified epithelia of the skin, tongue, esophagus, or cervix. Cytokeratin 7 recognizes specific subtypes of adenocarcinomas and can be used to differentiate between Cytokeratin 7-positive tissues such as ovarian carcinomas and transitional cell carcinomas and Cytokeratin 7-negative tissues such as carcinomas of the gastrointestinal tract and prostate cancers.

Antibody	Clone	Localization	Catalog Family
Cytokeratin 7	OV-TL12/30	Cytoplasm	AM255, AX255, MU255

## Cytokeratin 20

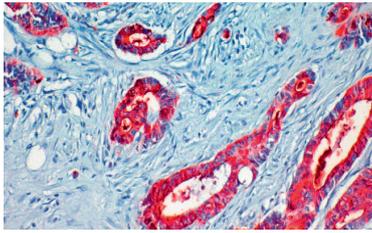


Cytokeratin 20 (46kD) is relatively less acidic than other type I keratins. This antibody reacts with certain types of carcinomas such as adeno carcinomas of the colon, transitional cell carcinomas of the bladder and Merkel cell tumors of the skin. It does not stain breast, lung and endometrial adenocarcinomas. The differential staining pattern of this antibody makes it very useful for tumor evaluation when used in conjunction with cytokeratin 7 staining.

Antibody	Clone	Localization	Catalog Family
Cytokeratin 20	IT-Ks20.8	Cytoplasm	AM315, AX315, MU315
Cytokeratin 20	EP23	Cytoplasm	AN849, AY849, NU849



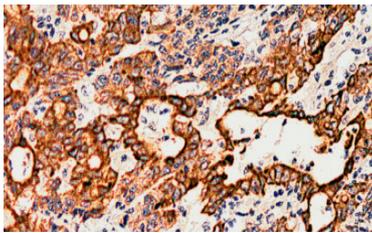
## CEA



CEA consists of a heterogeneous family of related oncofetal 200 kD glycoproteins that is secreted into the glycocalyx surface of gastrointestinal cells. Usually CEA is demonstrated as a linear labeling of the apical poles of cells lining the glandular lumen and, occasionally, as weak staining near the apex of colonic epithelial cells. Pancreatic carcinomas, testicular tumor, gallbladder neoplasms and granular cell myoblastomas stain positive, whereas malignant tumors of brain, prostate, skin, lymphoreticular tissues, hepatocellular carcinomas, esophageal squamous cell carcinomas, and mesothelioma fail to stain for CEA. This antibody stains carcinoembryonic antigen in the cytoplasm of positive cells.

Antibody	Clone	Localization	Catalog Family
CEA	B01-94-11M-P	Cytoplasm	AM009, AX009, MU009
CEA	CEA88	Cytoplasm	AM365, AX365, MU365
CEA	Polyclonal	Cytoplasm	AR009, AW009

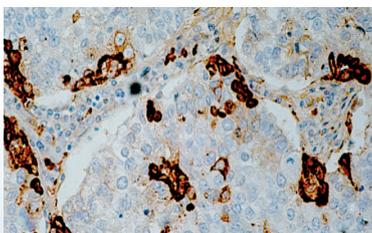
## Cytokeratin 19



Cytokeratin 19 (molecular mass 40 kD) is a marker of simple epithelia. Cytokeratin 19 has been found in mesothelial and mesothelioma cells, ovarian cysts, cystadenomas, and ovarian carcinomas, in adenocarcinomas of the lung and in tumor cells of pulmonary metastases, in the ductal cells of normal pancreas and in pancreatic cancers. It has been shown to be present in the basal layer of non-keratinizing stratified squamous epithelia such as the oral cavity and the ectocervix.

Antibody	Clone	Localization	Catalog Family
Cytokeratin 19	RCK108	Cytoplasm	AM246, AX246, MU246

## Napsin-A

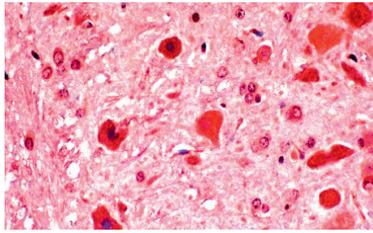


Napsin A has specific function in normal alveolar epithelium and is proposed to play a role in the proteolytic processing of surfactant precursors. Napsin A is reported to be predominantly expressed in lamellar bodies of type II pneumocytes, secondary lysosomes of alveolar macrophages, respiratory epithelium of terminal and respiratory bronchioles, plasma cells within a subset of lymphocytes in normal lung, as well as in epithelial cells of renal tubules in normal kidney and is weakly expressed in normal spleen. Napsin-A is sensitive for primary lung adenocarcinoma.

Antibody	Clone	Localization	Catalog Family
Napsin-A	IP64	Cytoplasm	AM701, AX701, MU701



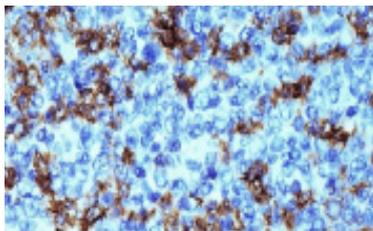
## Calretinin



Calretinin is approved as a highly sensitive and specific marker for mesothelial cells and one of the best positive markers for differentiating epithelial malignant mesotheliomas. This polyclonal antibody specifically recognizes calretinin in tissue originating from human, monkey, rat and mouse. It does not cross-react with other known calcium-binding proteins as determined by Western Blot analysis and by its distribution in the brain as determined by immunohistochemistry. This antibody stains calretinin antigen in cytoplasm of various neurons in normal brain and mesothelial cells. Calretinin is used as a biomarker to differentiate epithelioid and biphasic mesothelioma from adenocarcinoma.

Antibody	Clone	Localization	Catalog Family
Calretinin	Polyclonal	Cytoplasm	AR413, AW413, PU413
Calretinin	2E7	Cytoplasm	AM583, AX583, MU583
Calretinin	SP13	Cytoplasm	AN747,AY747, NU747

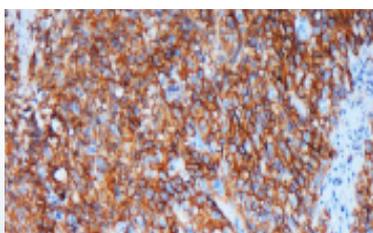
## PD-1



PD-1, also known as programmed cell death protein 1 or CD279 (cluster of differentiation 279), is a cell surface receptor that belongs to the CD28 immunoglobulin super family and is expressed on T cells and pro-B cells. Studies have shown that PD-1/PD-L interaction function as an immune checkpoint for induction and maintenance of T-cells involved in peripheral tolerance and protects tissues from autoimmune attack. PD-1 down regulates the immune system which in turn reduces autoimmunity and promotes self-tolerance. PD-1 performs dual mechanism of promoting apoptosis (programmed cell death) in self antigen specific T-cells in lymph nodes at the same time inhibiting apoptosis in regulatory T cells (suppressor T cells).

Antibody	Clone	Localization	Catalog Family
PD-1	IHC001	Membrane	AM922, AX922, MU922

## PD-L1

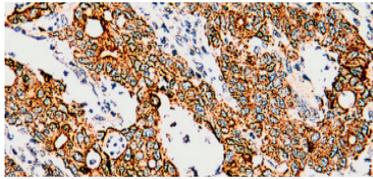


PD-L1 (Programmed death ligand 1) or cluster of differentiation 274 (CD274) or B7 homolog 1 (B7-H1) is immunoglobulin-like type I transmembrane glycoprotein that act as a ligand for programmed death 1 (PD-1). PD-L1 expression is seen on T cells, B cells, dendritic cells, and monocytes. It is critical factor in infection and disease progression of human immunodeficiency virus, sepsis, and tuberculosis. PD-L1 upon interaction with its receptor PD-1, delivers inhibitory signals to activated B cells and T cells, and thus helps to maintain the balance between effective immunity, tolerance and immunopathology. Over-expression of PD-L1 may allow cancer cells to evade the actions of the host immune system.

Antibody	Clone	Localization	Catalog Family
PD-L1	IHC411	Membrane	AN921, AY921, NU921



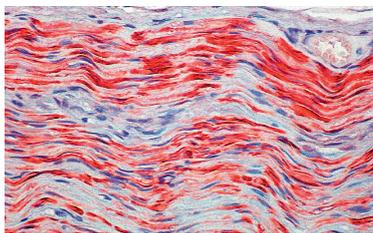
## PAN Cytokeratin



Human keratins are family of water-insoluble proteins with molecular weights ranging from 40-68kD. This monoclonal cytokeratin antibody can be applied to detect cytokeratins 4, 5, 8, 10, 13, 18 in simple or stratified epithelium in most vertebrates including humans. It can be used as a marker for carcinomas as well as some special types of tumors which have an epithelial component or differentiation. The antibody stains cytokeratin in cytoplasm of normal or malignant epithelial cells.

Antibody	Clone	Localization	Catalog Family
PAN Cytokeratin	Lu-5	Cytoplasm	AM181, AX181, MU181
PAN Cytokeratin	C11	Cytoplasm	AM357, AX357, MU357

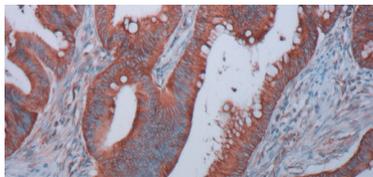
## Neurofilament



Neurofilaments (10 nm diameter) and microtubules (25 nm diameter) comprise the main structural elements of neuronal axons, dendrites, and perikarya. Neurofilaments are composed of three major polypeptides referred to as the neurofilament triplet with approximate molecular weights of 200 kD, 160 kD and 68 kD. This antibody can be used for positive identification of neurons in the central and peripheral nervous systems. In general, co-expression of keratin and neurofilament should be interpreted as indicating neuroendocrine differentiation of a given tissue or neoplasm. The antibody stains Neurofilament in sections of brain and other tissues.

Antibody	Clone	Localization	Catalog Family
Neurofilament	NE-14	Cytoplasm	AM073, AX073, MU073

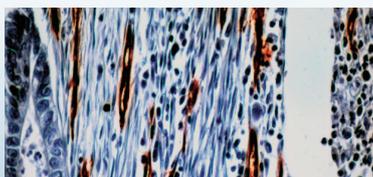
## ALK/p80



This antibody recognizes a human p80 protein, identified as a hybrid of the anaplastic lymphoma kinase (ALK) gene and the nucleophosmin (NPM) gene resulting from the t(2;5)(p23;q35) translocation found in a third of large cell lymphomas. This antibody can be used to detect p80 in these lymphomas and may also be used to detect a recently described subtype of large B cell lymphoma, which expresses the full-length ALK protein.

Antibody	Clone	Localization	Catalog Family
ALK/p80	SP8	Cytoplasmic and nuclear	AN770, AY770, NU770

## CD34

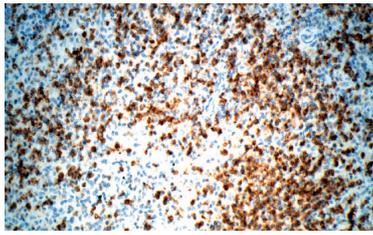


This is an antibody to the CD34 antigen in human endothelial and hematopoietic cells. It stains positive in a variety of vascular and lymphatic tumors. QBEnd/10 may now prove to be a more specific method of evaluating vascularization than Factor VIII antibody and is an important tool for tumor evaluation. This antibody stains endothelial cell cytoplasm and cross-reacts with basement membrane collagen.

Antibody	Clone	Localization	Catalog Family
CD34	QBend/10	Membrane	AM236, AX236, MU236
CD34	EP88	Membrane	AN779, AY779, NU779



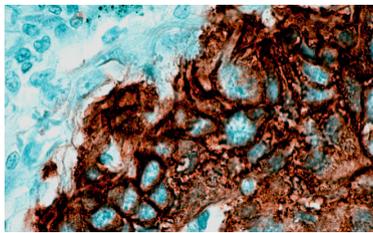
## MPO



Myeloperoxidase is an important enzyme used by granulocytes during phagocytic lysis of foreign particles engulfed. In normal tissues and in a variety of myeloproliferative disorders, myeloid cells of both neutrophilic and eosinophilic types at all stages of maturation, exhibit strong cytoplasmic reactivity for MPO. Erythroid precursors, megakaryocytes, lymphoid cells, mast cells, and plasma cells are nonreactive. MPO is not observed in the neoplastic cells of a wide variety of epithelial tumors and sarcomas. MPO is useful in differentiating between myeloid and lymphoid leukemias.

Antibody	Clone	Localization	Catalog Family
MPO	Polyclonal	Cytoplasm	AR496, AW496, PU496

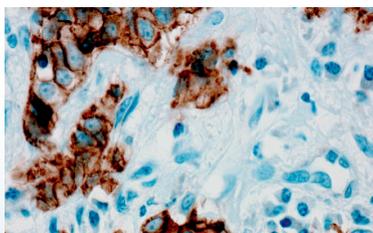
## EGFR



EGFR (LRVAP) reacts with the 170 kD EGFR transmembrane glycoprotein. It binds specifically to the intracellular portion, regardless of phosphorylation state. The extracellular domain binds epidermal growth factor (EGF) as a proliferation signal. The EGFR antibody is made against a sequence which is unique from related tyrosine kinase receptors and hence shows no cross-reactivity.

Antibody	Clone	Localization	Catalog Family
EGFR	Polyclonal	Membrane and Cytoplasm	AR335, AW335, PU335
EGFR	EP22	Membrane and Cytoplasm	AN781, Y781, NU781

## E-Cadherin

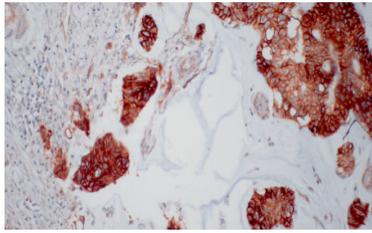


E-Cadherin is a transmembrane glycoprotein that plays an important role in epithelial cell adhesion. In prostate cancers, the expression of E-cadherin is reported to be reduced or absent in comparison with its expression in normal prostate which is uniformly strong. A decreased expression of E-Cadherin is associated with metastatic potential and poor prognosis in breast cancer and esophagus cancer. In combination with p120 Catenin or Cytokeratin, it is useful for the differentiation between ductal (E-Cadherin positive) and lobular (E-Cadherin negative) breast carcinomas. It may also help in diagnosis of mesothelioma.

Antibody	Clone	Localization	Catalog Family
E-Cadherin	36	Membrane	AM390, AX390, MU390
E-Cadherin	EP6	Membrane	AN725, AY725, NU725



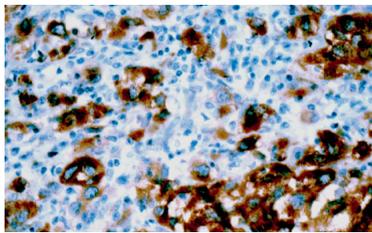
## Ep-CAM



Ep-CAM is a highly conserved type I transmembrane glycoprotein and is expressed on most normal and malignant epithelial cells. Ep-CAM is also known as epithelial cell adhesion molecule or MOC31, Ber-EP4. It is detected at the membrane/cytoplasm of the majority of epithelial tissues (all simple, pseudo-stratified and transitional epithelial), with the exception of the adult squamous epithelium and some epithelium-derived cell, such as hepatocytes, epidermal keratinocytes, gastric parietal cells, myoepithelial cells, and thymic cortical epithelium. In tumors, Ep-CAM is over expressed by the majority of human epithelial carcinomas, except hepatocellular carcinomas (HCC).

Antibody	Clone	Localization	Catalog Family
Ep-CAM	EP155	Membrane	AN820, AY820, NU820

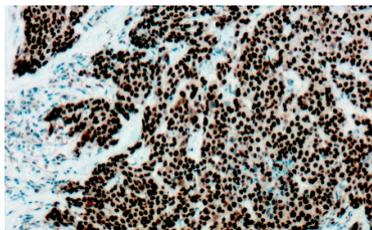
## Melan-A



Melan-A, a product of the MART-1 gene, is a differentiation antigen which is expressed in 100% of melanocytes, most melanomas, and 50-60% of melanoma cell lines. It is one of the melanoma antigens recognized by autologous cytotoxic T cells, and as an antigenic target for tumor infiltrating lymphocytes. This antibody also stains Melan-A in normal melanocytes and in the retina. It does not stain normal or tumor tissues from non-melanocyte lineages. This antibody stains positive in cytoplasm of melanocytes and other positive cells.

Antibody	Clone	Localization	Catalog Family
Melan-A	A103	Cytoplasm	AM361, AX361, MU361

## p53

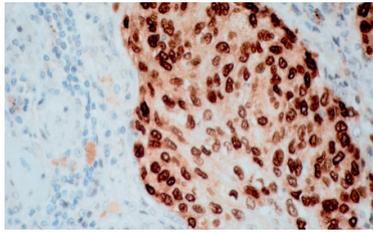


Tumor protein p53, a nuclear protein, plays an essential role in the regulation of cell cycles, specifically in the transition from G0 to G1. It is found in very low levels in normal cells, and it functions as a tumor suppressor within a variety of tumors by either stimulating apoptosis or growth arrest in deference to cell type and physiological factors. p53 is overexpressed in over 50% of human cancers. Positive staining of p53 detected by immunohistochemistry has been observed in colon cancer, breast cancer, lung cancer, prostate cancer and ovary cancer.

Antibody	Clone	Localization	Catalog Family
p53	EP9	Nucleus	AN728, AY728, NU728
p53	BP53-12-1	Nucleus	AM195, AX195, MU195
p53	DO7	Nucleus	AM239, AX239, MU239
p53	1801	Nucleus	AM240, AX240, MU240



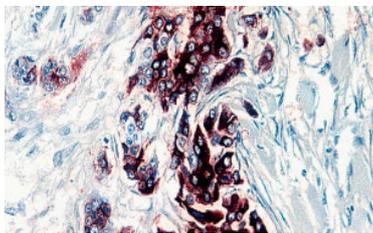
## SOX2



SOX2 is a member of the SRY-related HMG-box (SOX) family of transcription factors involved in the regulation of embryonic development and in the determination of cell fate. It is required for stem cell maintenance in the central nervous system, and it also regulates gene expression in the stomach. SOX2 is necessary for regulating multiple transcription factors that affect Oct3/4 expression. An essential function of SOX2 is to stabilize embryonic stem cells in a pluripotent state by maintaining the requisite level of Oct3/4 expression. SOX2 is associated with aggressive tumor behavior, and is expressed in lung adenocarcinomas.

Antibody	Clone	Localization	Catalog Family
SOX2	EP103	Nucleus	AN833, AY833, NU833
SOX2	Polyclonal	Nucleus	AR788,AW788, PU788

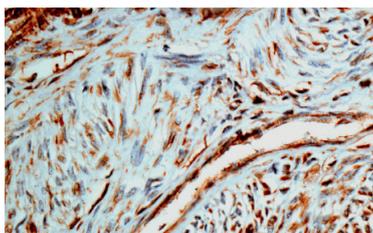
## TAG-72



Tumor-Associated Glycoprotein 72 (TAG-72) is an oncofetal mucin antigen expressed by normal secretory endometrium and most human adenocarcinomas, including colorectal, gastric, pancreatic, mammary, and ovarian. This antigen is expressed by invasive ductal breast carcinomas, colon, pancreatic, gastric, esophageal, lung, ovarian and endometrial adenocarcinomas. It is not expressed by leukemias, lymphomas, sarcomas, mesotheliomas, melanomas, or benign tumors. This antigen is also expressed on normal secretory endometrium, but not on other normal tissues. This antibody stains positive in the cytoplasm of specific carcinoma cells.

Antibody	Clone	Localization	Catalog Family
TAG-72	B72.3	Cytoplasm	AM054, AX054, MU054

## Vimentin

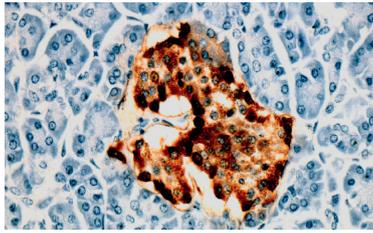


Vimentin is the major intermediate filament in a variety of mesenchymal or mesenchymally derived non-muscle cell types. Vimentin is found in all types of sarcomas and lymphomas. Positive staining for vimentin is seen in most cells of fibrosarcomas, liposarcomas, malignant fibrous histiocytomas, angiosarcomas, chondrosarcomas and lymphomas. When the vimentin antibody is used in combination with other antibodies as a panel, it can aid in the histological classification of normal and malignant tissues. This antibody immunohistochemically labels a variety of mesenchymal cells.

Antibody	Clone	Localization	Catalog Family
Vimentin	V9	Cytoplasm	AM074, AX074, MU074
Vimentin	LN6	Cytoplasm	AM163, AX163, MU163



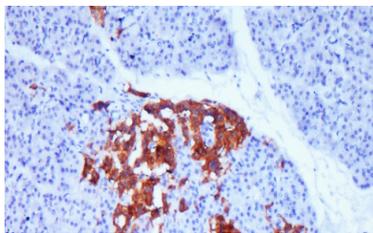
## Chromogranin A



This antibody recognizes Chromogranin A (68 kD) and other related chromogranin polypeptides from human, monkey, and pig. Chromogranin is widely distributed and through immunohistochemistry, chromogranin has been demonstrated in several elements of the diffuse neuroendocrine system, including anterior pituitary, thyroid parafollicular C cells, parathyroid chief cells, pancreatic islet cells, intestinal enteroendocrine cells, and tumors derived from these cells. The measurement of Chromogranin A has become a valuable tool in the investigation of neuroendocrine neoplasia. This antibody recognizes Chromogranin A (68 kD) and other chromogranin polypeptides in cytoplasm of positive cells.

Antibody	Clone	Localization	Catalog Family
Chromogranin A	LK2H10	Cytoplasm	AM126, AX126, MU126
Chromogranin A	PHE-5	Cytoplasm	AM356, AX356, MU356

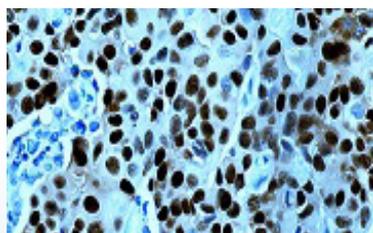
## Synaptophysin



Synaptophysin, a 38 kD glycoprotein, is the major integral membrane protein of synaptic vesicles. It is a sensitive quantitative molecular marker of synaptic density and also a useful marker in the identification and characterization of neuronal and neuroendocrine neoplasms of the adrenal medullary, pituitary, thyroid and islet cell tumors, gastrointestinal, bronchial, thymic and pancreatic carcinoid tumors. Immunohistochemistry of synaptophysin has been used in the evaluation of functional bowel disorders, cortical epileptogenesis, schizophrenia, amyotrophic lateral sclerosis, and lung adenocarcinoma in well differentiated fetal type.

Antibody	Clone	Localization	Catalog Family
Synaptophysin	Snp88	Cytoplasm	AM363, AX363, MU363
Synaptophysin	EP158	Cytoplasm	AN857, AY857, NU857

## ALDH1A1

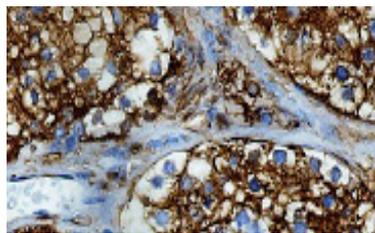


ALDH1A1 (aldehyde dehydrogenase family 1 member A1), also designated as retinal dehydrogenase 1 (Raldh1 or RALDH1), is a liver cytosolic isoform of acetaldehyde dehydrogenase belongs to the aldehyde dehydrogenase family of proteins. It is involved in alcohol metabolism pathway and also essential for conversion of retinol to retinoic acid which is very important in cell to cell signaling. ALDH1A1 is predominantly expressed in epithelium of testis, brain, liver, eye, kidney as well as neural and hematopoietic stem cells. It plays a critical role in multiple biological activities including drug resistance, cell differentiation and oxidative stress response. High expression of ALDH1A1 is found in solitary fibrous tumor (SFT), Hemangiopericytoma (HPC), melanoma, lung cancer and glioblastoma.

Antibody	Clone	Localization	Catalog Family
ALDH1A1	rALDH1A1/7285	Cytoplasm	AMD07, AXD07, MUD07



## SFTPD



SFTPD (Surfactant pulmonary-associated protein D) is a protein that belongs to group III of the collectin family of C-type lectins. It is synthesized in many tissues including respiratory epithelial cells, alveolar type II cells and nonciliated bronchiolar cells in the lung. SFTPD is considered as humoral molecules of the innate immune system and is upregulated in a variety of inflammatory and infectious conditions. It is also involved in the development of acute and chronic inflammation of the lung by maintaining surfactant homeostasis by regulating the structure of surfactant phospholipids.

Antibody	Clone	Localization	Catalog Family
SFTPD	SFTPD/7084R	Extracellular	AND05, AYD05, NUD05



## BioGenex Primary Antibody Format and Pack Size

BioGenex antibodies are optimized to provide a maximum signal with the minimum background for immunohistochemical staining. All our antibodies are optimized and recommended for use with all Super Sensitive™ Detection Systems to provide optimum staining.

BioGenex Ready-to-Use (RTU) antibodies are fully optimized for use with BioGenex Detection Systems without the need for further dilution or titration. BioGenex concentrated antibodies are provided with recommended dilutions for optimal use with BioGenex Detection Systems, allowing rapid titration and testing.

Prefix	Type	Species	Suffix	Volume and Format
AM/AN	Monoclonal	AM-Mouse/AN-Rabbit	-5M/5ME	6 mL - Ready-to-use (manual)
AM/AN	Monoclonal	AM-Mouse/AN-Rabbit	-10M/10ME	10 mL - Ready-to-use (i6000™)
AX/AY	Monoclonal	AX-Mouse/AY-Rabbit	-YCD/YCDE and -50D/50DE	16 mL and 5 mL Ready-to-use (Xmatrix®)
AR	Polyclonal	Rabbit	-5R/5RE	6 mL - Ready-to-use (manual)
AR	Polyclonal	Rabbit	-10R/10RE	10 mL - Ready-to-use (i6000™)
AW	Polyclonal	Rabbit	-YCD/YCDE and -50D/50DE	16 mL and 5 mL Ready-to-use (Xmatrix®)
MU/NU	Monoclonal	AM- Mouse/AN-Rabbit	-UC/UCE and -5UC/5UCE	1 mL and 0.5 mL Concentrate
PU	Polyclonal	Rabbit	-UC/UCE and -5UC/5UCE	1 mL and 0.5 mL Concentrate

### Other Panel Markers from BioGenex

Breast cancer panel	Pancreas tumor
B&T cell Associated Lymphoma	Liver cancer
Cervical cancer	Kidney cancer
Colorectal and stomach cancer	Head & neck cancer
Melanoma	Bladder cancer
Muscle cancer	Germ cell tumor
Ovarian cancer	Vascular tumor
Prostate/Testicular cancer	Pituitary gland
Neuroendocrine tumor	Esophagus cancer

For specific information on the individual antibody, please refer to the datasheets available on [www.biogenex.com](http://www.biogenex.com) or call BioGenex Technical Support at **1(800)421-4149** or write to [support@biogenex.com](mailto:support@biogenex.com).



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Outside the U.S., call +91-40-27185500



[www.biogenex.com](http://www.biogenex.com)

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