IHC PANEL MARKERS

Neuropathology

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.

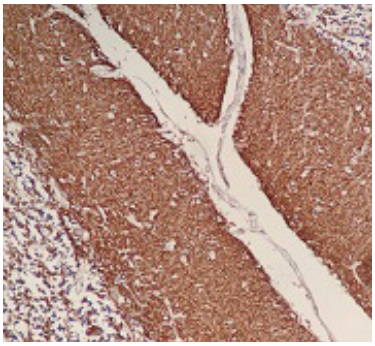
BioGenex offers a vast spectrum of high-quality antibodies for both diagnostic and reference laboratories. BioGenex strives to support efforts in clinical diagnostics and drug discovery development as we continue to expand our antibody product line offering in both ready-to-use and concentrated formats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

There are over 130 different types of brain tumors, where an abnormal proliferation of any cell type leads to a growth within brain tissue. These different subtypes can be identified in part by cell-type-specific markers. The use of antibodies for these markers in conjunction with microscopy serves as a powerful tool in diagnosis and research.

Antibodies for Neuropathology
CD56, Synaptophysin, IDH1, NESTIN, PGP9.5, Chromogranin A, S100B, SOX2, Glutamine Synthetase, ATRX, NeuN, OLIG2, Neurofilament, Neuron Specific Enolase, Glial Fibrillary Acidic Protein, Calcitonin, Tau, EGFR, Tubulin 3, E-Cadherin, SOX10, Vimentin, CD45, CD68, HLA-DR, CD11b, STAT5a, SSTR 2.

BioGenex

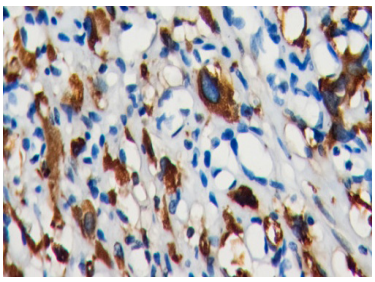
CD56



CD56, also known as a neural cell adhesion molecule, is a homophilic binding glycoprotein expressed on the cell surface of neural, glial and skeletal muscle cells. CD56 is a phenotypical marker for natural killer cells and many other immune cells, including alpha-beta T cells, gamma delta T cells, dendritic cells and monocytes. Depending on the way the protein is spliced, the functions could vary vastly. In general, Twenty-seven forms of NCAM were found by analysis of individual NCAM transcripts. The expression of alternatively spliced forms of NCAM is developmentally regulated and therefore suggests a role for NCAM in development. Alpha 2, 8-linked polysialic acid modification of NCAM plays an important role in neural development and synaptic plasticity. In Immunohistochemistry, CD56 antibodies can be used to distinguish many tumors such as myeloma, Wilm?s Tumor, neuroblastoma, Ewing?s Sarcoma and many others.

Antibody	Clone	Localization	Catalog Family
CD56	128A8	Membrane	AMA06, AXA06, MUA06

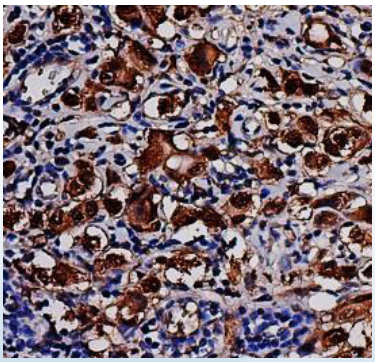
Synaptophysin



Synaptophysin, a 38 kD glycoprotein, is the major integral membrane protein of synaptic vesicles. It consists of four transmembrane domains. This protein is present in almost all neurons and neuroendocrine cells throughout the body. This antibody may be useful for the identification of tumors with neural and neuroendocrine differentiation.

Antibody	Clone	Localization	Catalog Family
Synaptophysin	SYP/3551	Cytoplasm	AMA50, AXA50, MUA50

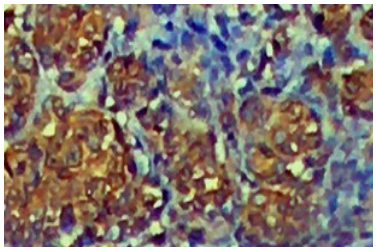
IDH1



This antibody identifies a 45kDa protein, which is recognized as isocitrate dehydrogenase (IDH1). It belongs to the isocitrate and isopropylmalate dehydrogenases family. IDH1 converts the compound isocitrate to 2-ketoglutarate in both cytoplasm and peroxisomes. This reaction also release a molecule called NADPH, which is required for other cellular processes.The NADPH produced from IDH1 is required in the breakdown of fats for energy, and it also safeguard cells from harmful molecules called reactive oxygen species. Recently, an inactivating mutation of IDH1 has been found to be involved in glioblastoma. IDH1 emerges to function as a tumor suppressor that, when inactivated, contributes to tumorigenesis in part through activation of the HIF-1 pathway.

Antibody	Clone	Localization	Catalog Family
IDH1	IDH1/1152	Nucleus/Cytoplasm	AMA22, AXA22, MUA22

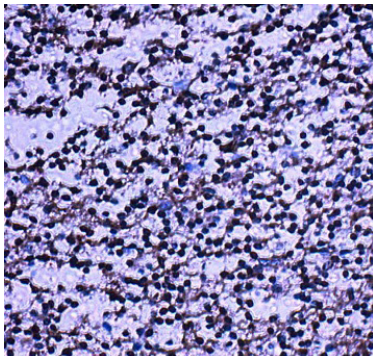
NESTIN



It is required for brain and eye development. It also promotes the disassembly of phosphorylated vimentin intermediate filaments(IF) during mitosis and may play a role in the trafficking and distribution of IF proteins and other cellular factors to daughter cells during progenitor cell division. Nestin is required for survival, renewal and mitogen-stimulated proliferation of neural progenitor cells. Nestin is a marker for neuroepithelial stem cells, glioma cells and tumor endothelial cells during rapid growth. Nestin is also expressed by dermatomal cells and by myoblasts during the earliest stages of myogenesis.

Antibody	Clone	Localization	Catalog Family
NESTIN	NES/2911	Cytoplasm & Membrane	AMA84, AXA84, MUA84

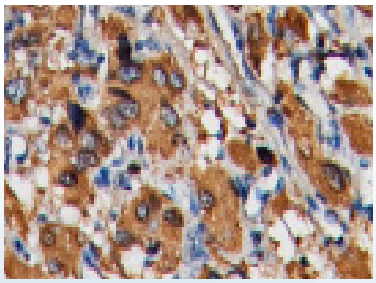
PGP9.5



This antibody reacts with a 20-30kDa protein, identified as PGP9.5, also known as ubiquitin UchL1. PGP9.5 is highly expressed in neurons and to cells of the diffuse neuroendocrine system and their tumors. It is abundantly present in all neurons (accounts for 1-2% of total brain protein), expressed specifically in neurons and testis/ovary. Although PGP9.5 protein expression is specific to neurons and testis/ovary tissue, it has been found to be expressed in certain lung-tumor cell lines. This abnormal expression of PGP9.5 is implicated in cancer and has led to the designation of PGP9.5 as an oncogene. Immunostaining for PGP9.5 has been shown in a wide variety of mesenchymal neoplasms as well. A mutation in PGP9.5 gene is believed to cause a form of Parkinson?s disease.

Antibody	Clone	Localization	Catalog Family
PGP9.5	UCHL1/775	Cytoplasm	AMA27, AXA27, MUA27

Chromogranin A

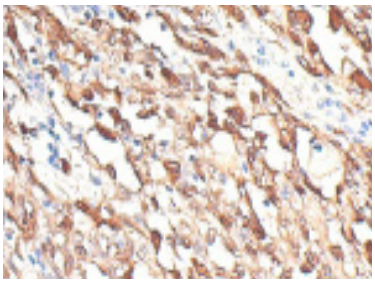


Chromogranin A is a 49-kDa acidic glycoprotein that belongs to the granin family, a principal component of dense-core granules in neuroendocrine cells, with which its expression generally correlates. Chromoganin A and hormones are co-secreted from neuroendocrine cells during the secretory granule exocytotic process. Chromoganin A itself can also be degraded into a series of smaller biologically active peptides, such as pancreastatin, catestatin, and vasostatins I and II. This antibody reacts with chromogranin A in neuroendocrine cells of the human stomach, colon, pancreas, adrenal gland, peripheral nerve tissue and carcinoid tumors.

Antibody	Clone	Localization	Catalog Family
Chromogranin A	CGA/413+CH-GA/777+CH-GA/798	Cytoplasm	AMA51, AXA51, MUA51

IHC PANEL MARKERS - Neuropathology

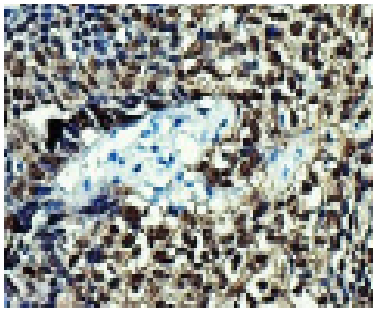
S100B



S100B protein is part of the S100 family of proteins. S100B is a calcium binding peptide that has 2 EF-hand calcium-binding motifs. S100 proteins are localized in the cytoplasm and/or nucleus of a wide range of cells, and involved in the regulation of a number of cellular processes such as cell cycle progression and differentiation. S100B has been implicated in having many functions including neurite expansion, proliferation of melanoma cells, inhibition of protein kinase cmediated phosphorylation, astrocytosis, axonal proliferation, inhibition of microtubule assembly and stimulation of Calcium ion fluxes. S100B is also associated with neurodegenerative diseases like Alzheimer's disease or other chronic neurological diseases. Apart from glial cell expression, S100B is also expressed in melanocytes, and can be used as a diagnostic tool for malignant melanoma.

Antibody	Clone	Localization	Catalog Family
S100B	S100B/1012	Nucleus/Cytoplasm	AMA15, AXA15, MUA15

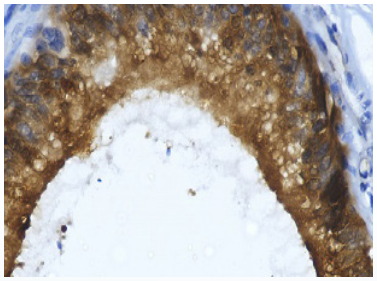
SOX2



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.

Antibody	Clone	Localization	Catalog Family
SOX2	SOX2/1791	Nucleus	AMA24, AXA24, MUA24

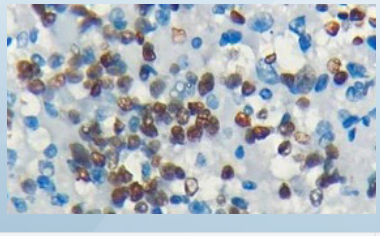
Glutamine Synthetase



Glutamine Synthetase (Gl Syn) forms a homo octamer that is a catalyst for the amination of glutamic acid to glutamine. It is a marker for astrocytes that serve as the primary site of conversion of glutamic acid to glutamine in the brain. Elevated level expression of glutamine Synthetase in glial cells has shown to protect neurons from degeneration due to excess glutamate. Glutamine Synthetase is present in the Testis and is involved in nitrogen homeostasis. Over expression of glutamine Synthetase was seen in Testis cancers.

Antibody	Clone	Localization	Catalog Family
Glutamine Synthetase	E-4	Cytoplasm	AMB64, AXB64, MUB64

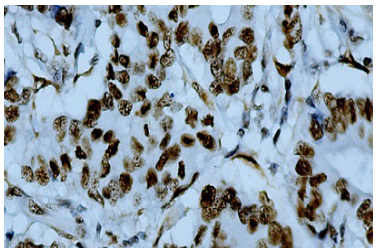
OLIG2



Olig2 (Oligodendrocyte lineage transcription factor 2) is a basic helix loop helix (bHLH) transcription factor belonging to group A of the OLIG family. Olig2 has a crucial role during development in specifying the final location of motor neurons and Oligodendrocyte in the spinal cord, along with the development within the hindbrain of somatic motor neurons. It is strongly expressed in Oligodendrocytes and in developing astrocytes. Olig2 is a potential diagnostic marker for oligodendrogliomas and can be used in a panel for astrocytomas.

Antibody	Clone	Localization	Catalog Family
OLIG2	OLIG2/7074R	Nucleus & Cytoplasm	ANC12, AYC12, NUC12

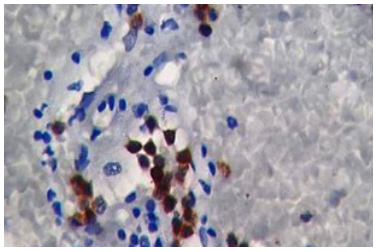
ATRX



α-thalassemia/mental retardation X-linked (ATRX) is a transcriptional regulator and helicase that belongs to the SNF2 family of chromatin remodeling proteins. Together with its binding partner death-associated protein 6 (Daxx), ATRX acts as histone chaperone to deposit histone variant H3.3 at repetitive DNA sequences such as telomeric, pericentric, and ribosomal gene repeats. This protein is found to undergo cell cycle-dependent phosphorylation, which regulates its nuclear matrix and chromatin association, and suggests its involvement in the gene regulation at interphase and chromosomal segregation in mitosis. Research studies indicate that the loss of ATRX protein occurs in numerous cancers, including pancreatic neuroendocrine tumors (PanNETs) and pediatric glioblastoma, where telomere maintenance occurs independently of telomerase.

Antibody	Clone	Localization	Catalog Family
ATRX	D-7	Nucleus	AMB05, AXB05, MUB05

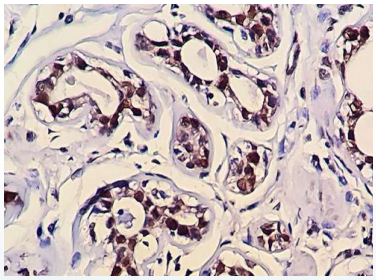
NeuN



Neuronal Nuclei, also known as NeuN, Fox-3, RBFOX3, is a 350 amino acid neuron-specific protein present in most neuronal cells of CNS and PNS. It is involved in the regulation of mRNA splicing and plays a role in regulating neural cell differentiation and nervous system development. NeuN is expressed in brain, including in cerebral cortex, hippocampus, thalamus, caudate/putamen, cerebellum, as well as in the spinal cord although, some neurons fail to be recognized by NeuN at all ages such as INL retinal cells, Purkinje cells, Cajal-Retzius cells, sympathetic ganglion cells and inferior olivary and dentate nucleus neurons. Dysfunctional NeuN has been associated with various neurological disorders such as neurodevelopmental delay, autism spectrum disorder, Benign rolandic epilepsy (BRE), and cognitive impairments.

Antibody	Clone	Localization	Catalog Family
NeuN	NeuN/7071R	Nucleus & Cytoplasm	ANC08, AYC08, NUC08

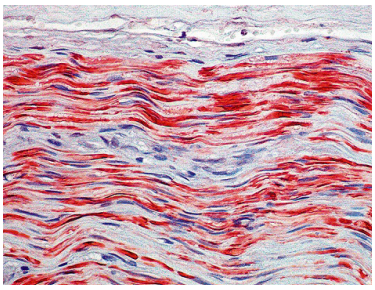
STAT5A



STAT5a, also known as STAT5 (Signal transducer and activator of transcription) belongs to STAT family of transcription factors. It is activated through tyrosine phosphorylation results in hetero-homo dimerization, nuclear translocation and regulation of gene expression. STAT5a proteins play a critical role in a variety of physiological functions, including reproduction, lactation, somatic growth and immune function. STAT5a and STAT5b are encoded by separate genes and share 93% amino acid identity and their signaling pathway is involved in the transition of organconfined prostate cancer to hormone-refractory disease.

Antibody	Clone	Localization	Catalog Family
STAT5A	C-6	Nucleus & Cytoplasm	AMC36, MUC36, AXC36

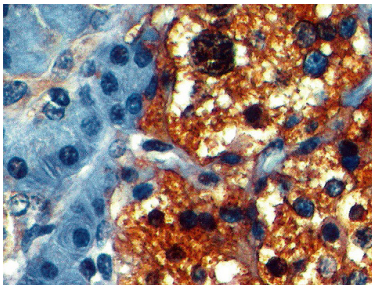
Neurofilament



Neurofilaments (10 nm diameter) and microtubules (25 nm diameter) constitute the main structural components of neuronal dendrites, neuronal axons and perikerya. Three major polypeptides with approximate molecular weights of 200 kD, 160 kD and 68 kD combine to form a triplet referred to as the neurofilament. 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

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

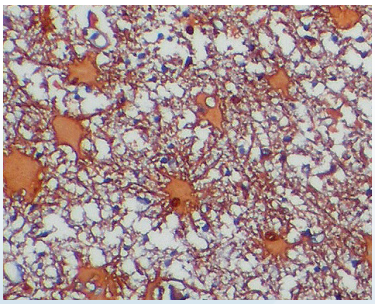
Neuron Specific Enolase



The gamma-gamma isoenzyme of the cytoplasmic enzyme enolase, known as neuron-specific enolase (NSE), has been demonstrated in neurons and neuroendocrine cells. In normal tissues, most neurons and their axonal and dendritic processes stain strongly positive for NSE, with the exception of Purkinje cells. NSE has been demonstrated in Schwann cells, ganglioneuromas, neuroblastoma, schwannomas, malignant melanomas, pheochromocytoma, paragangliomas, carcinoids, medullary thyroid carcinomas, pituitary adenomas, pancreas and GI tract endocrine tumors, and small cell carcinoma of the lung. A number of non-neuronal and nonendocrine tumors may also express NSE. NSE positivity should not be relied upon entirely as evidence of the neuronal or neuroendocrine differentiation of a given neoplasm.

Antibody	Clone	Localization	Catalog Family
Neuron Specific Enolase	MIG-N3	Cytoplasm	AM055, AX055, MU055

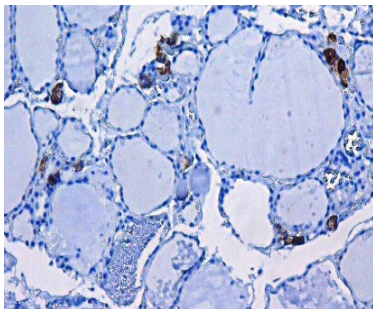
Glial Fibrillary Acidic Protein



Glial fibrillary acidic protein (GFAP) is the subunit of the glial specific "inter-mediate" filament that include desmin filaments in smooth muscle, vimentin filaments in cultured fibroblasts, keratin filaments in epithelium and neurofil-aments in neural cells. GFAP is a major product of astrocytic differentiation. Compared with special stains currently used to identify an astroglial compo-nent in brain tumors, GFAP staining is more sensitive. Further, the immuno-histochemical staining method is useful in demonstrating reactive astrocytes, whether secondary to a brain tumor or to any other neuro-pathological con-dition.

Antibody	Clone	Localization	Catalog Family
Glial Fibrillary Acidic Protein	GA-5	Cytoplasm	AM020, AX020, MU020

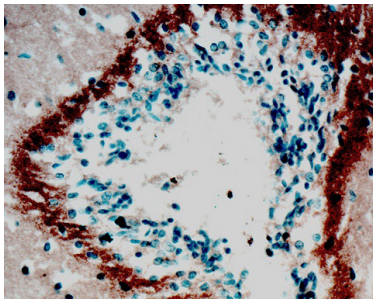
Calcitonin



Calcitonin (CT) is a polypeptide hormone with 32 amino acids synthetized primarily by the thyroid. CT is able to decrease blood calcium levels by direct inhibition of mediated bone resorption and by enhancing calcium excretion by the kidney. Immunohistochemical staining with anti-calcitonin antibody has proven to be an effective way of demonstrating calcitonin-producing cells in the thyroid. C-cell hyperplasia and medullary thyroid carcinomas stain positive for calcitonin. Studies of calcitonin have resulted in the identification of a wide spectrum of C-cell proliferative abnormalities.

Antibody	Clone	Localization	Catalog Family
Calcitonin	SP17	Membrane	AN926, AY926, NU926

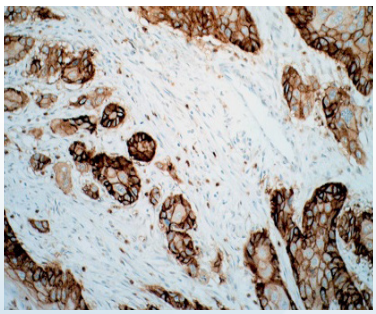
Tau



The Tau protein is expressed in axonal compartments of neurons. Tau protein plays an crucial role in the assembly of monomer tubulin into microtubules to form the neuronal microtubule network. Tau?s major role is to regulate neuronal microtubule assembly and stability thus playing a major role in movement disorders. One of the histopathological markers of Alzheimer?s disease are Neurofibrillary tangles (NFTs), show signs of heavily incorporated Tau protein. Anti-Tau antibody binds Neurofibrillary tangles (NFTs) to show a strong positive staining in NFT areas and may also stain Pick bodies in Pick?s disease. Filamentous tau protein deposits are also the defining characteristics for progressive supranuclear palsy, and corticobasal degeneration. In normal tissue, the antibody may stain neurons and axons in the brain and spinal cord

Antibody	Clone	Localization	Catalog Family
Tau	TAU-2	Cytoplasm	AM412, AX412, MU412

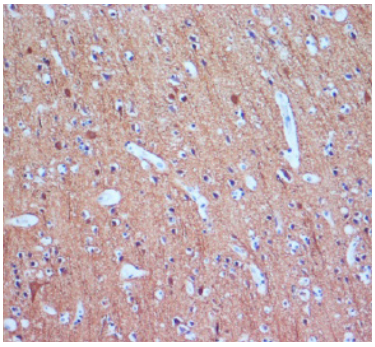
EGFR



Epidermal growth factor receptor (EGFR) is a 170 kDa transmembrane glycoprotein receptor tyrosine kinase that, activated by epidermal growth factor (EGF), affects cell growth and differentiation. Binding of EGF or TGF alpha to EGFR activates tyrosine kinase activity of the receptor. EGFR associated with a number of cancers, including lung cancer, anal cancers and glioblastoma multiforme. These somatic mutations involving EGFR lead to its constant activation, which produces uncontrolled cell division. In breast cancer, EGFR is predorminately expressed in basal cell-like carcinoma; it has been recommendated for identification of basal-like breast carcinoma along with Cytokeratin 5/6.

Antibody	Clone	Localization	Catalog Family
EGFR	EP22	Membrane/Cytoplasm	AN781, AY781, NU781
EGFR	Polyclonal	membrane	AR335, AW335, PU335
EGFR	GFR/2596	membrane	AMC68, AXC68, MUC68

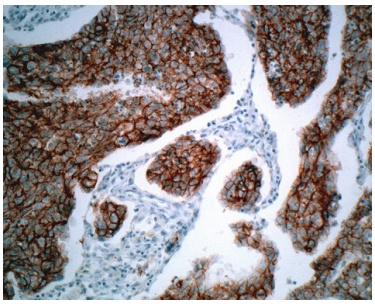
Tubulin 3



Beta tubulins are one of two core protein families (alpha and beta tubulins) that heterodimerize and assemble to form microtubules. This protein is primarily expressed in neurons and may be involved in neurogenesis and axon guidance and maintenance. In adults, tubulin beta 3 (TUBB3) is primarily expressed in neurons and is commonly used as a neuronal marker. It plays an important role in neuronal cell proliferation and differentiation. Mutations in this gene cause congenital fibrosis of the type 3 extraocular muscles. Tubulin beta 3 (TUBB3) is also found in a wide range of tumors. Studies indicate that it is a predictive and prognostic marker in various tumors.

Antibody	Clone	Localization	Catalog Family
Tubulin 3	TUJ1	Membrane	AM952, AX952, MU952

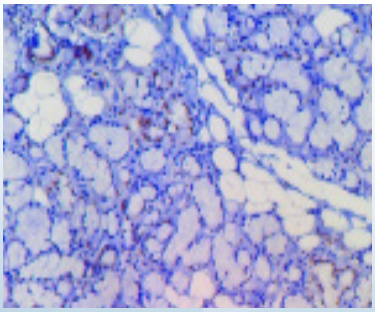
E-Cadherin



E-cadherin (123-kD) is a cell surface glycoprotein responsible for Ca 2+ -dependent intercellular adhesion between epithelial cells; it is also called uvomorulin, L-CAM, cell-CAM 120/80 or Arc-1. Alterations in the cell-cell adhesion mechanism mediated by E-cadherin which is lightly associated with alpha catenin may have implications in the metastatic potential of prostate cancer. E-cadherin may also play a role in adhesion of dendritic epidermal T cells to keratinocytes. Clone 36 may be used to investigate the process of tumor invasion

Antibody	Clone	Localization	Catalog Family
E-Cadherin	36	Membrane/Cytoplasm	AM390, AX390, MU390

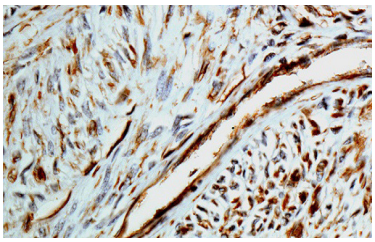
SOX10



The SOX10 protein belongs to the SOX genes family of transcription factors that bind to the minor groove in DNA. They are characterized by a homologous sequence called the HMG-box. SOX10 is known to be involved in regulation of embryonic development and determination of cell fate. It combines with other proteins to form complexes and acts as a transcriptional activator. It is very important for neural crest and peripheral nervous system development. SOX10 plays an important role in melanocytic cell differentiation. It can be used as a sensitive marker for melanoma.

Antibody	Clone	Localization	Catalog Family
SOX10	SOX10/991	Nucleus	AM995, AX995, MU995

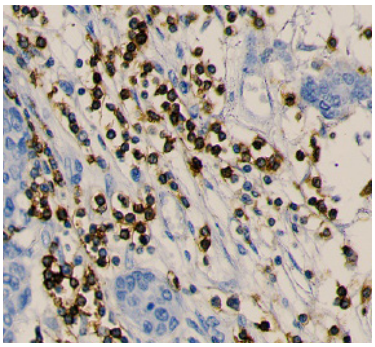
Vimentin



Vimentin, is a key component of the protein intermediate filament family, is more commonly expressed in mesenchymal cells and helps to maintain cell integrity and protect cells against mechanical stress. Vimentin has been observed to be over expressed in certain cancers like epithelial cancers, tumors of the central nervous system, including prostate cancer, gastrointestinal tumors, breast cancer, malignant melanoma, and lung cancer, nevertheless, the expression of vimentin in cancer progression remains to studied in detail and how the Vimentin's over expression in cancer correlates well with accelerated tumor growth, invasion, and poor prognosis; In recent years, vimentin has been recognized as a potential marker for epithelial-mesenchymal transition (EMT), however the role of vimentin's remains unknown. More research has to be done to evaluate its specific role in cancer

Antibody	Clone	Localization	Catalog Family
Vimentin	V9	Cytoplasm	AM074, AX074, MU074

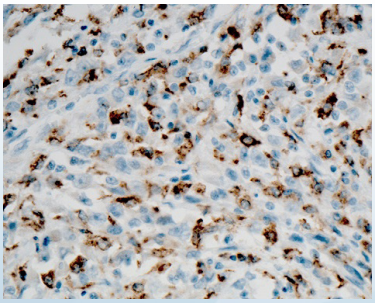
CD45



CD45 antigen (leukocyte common antigen), a unique and ubiquitous membrane glycoprotein with a molecular mass of about 200 kDa, is expressed on almost all hematopoietic cells except for mature erythrocytes. CD45 has a functional role in hematopoietic cell activation and differentiation. Anti-CD45 (anti-leukocyte common antigen) is routinely used to aid the differential diagnosis of undifferentiated neoplasms, whenever malignant lymphoma is suspected by the morphological or clinical data. Therefore a positive result is highly indicative of hematolymphoid origin. Certain types of hematolymphoid neoplasms may lack CD45 (Hodgkin lymphoma, some T-cell lymphomas, and some leukemias) so its absence does not rule out a hematolymphoid tumor. This antibody is expressed almost exclusively by cells of hematopoietic lineage and is present in most benign and malignant lymphocytes as well as plasma cell precursors.

Antibody	Clone	Localization	Catalog Family
CD45	2B11 & PD7/26	Membrane	AM941, AX941, MU941

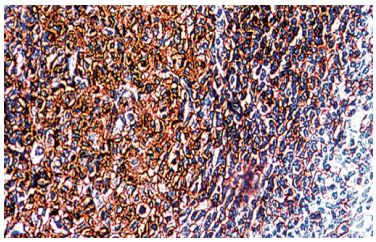
CD68



The CD68 is a transmembrane protein of 87-115 kDa with heavy glycosylation, it is specifically expressed by tissue macrophages, Langerhans cells and at low levels by dendriticcells. CD68 acts as a marker monocyte/macrophage lineage cells. CD68 could play a role in phagocytic activities of tissue macrophages, both in intracellular lysosomal metabolism and extracellular cell-cell and cell-pathogen interactions. This antibody is capable of staining monocytes, Kupffer cells, osteoclasts, granulocytes and their precursors; Lymphomas are negative or show a few granules. This antibody may be useful for the identification of Myelomonocytic and Histiocytic Tumors. CD68 may help to distinguish Malignant Fibrous Histiocytoma from other Pleomorphic Sarcomas. However, since CD68 detects a formalin-resistant epitope that may be associated with lysosomal granules, other lysosome-rich cells may also produce positive results

Antibody	Clone	Localization	Catalog Family
CD68	CD68/G2	Cytoplasm	AM549, AX549, MU549

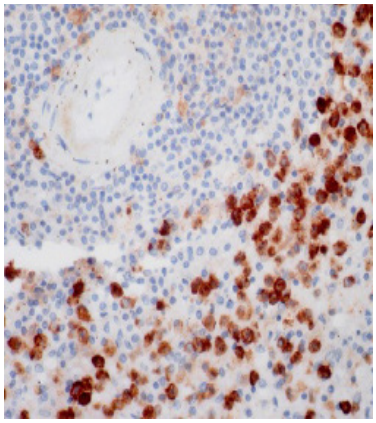
HLA-DR



LN3 expressed mainly by antigen presenting cells, B cells of the germinal centers and mantle zones, and additionally by monocytes, macrophages and interdigitating histiocytes, is reactive with a non-polymorphic antigen of the HLA-DR (Ia) region. HLA-DR antigens also occur on a variety of epithelial cells and their neoplastic descendants. LN3 will produce medium intensity staining on B lymphocytes of germinal centers and mantle zones, and high intensity staining of interdigitating histiocytes in T cell zones. HLA-DR is a transmembrane glycoprotein composed of an alpha chain (36 kDa) and a beta chain (27 kDa).

Antibody	Clone	Localization	Catalog Family
HLA-DR	LN3	Membrane	AM154, AX154, MU154

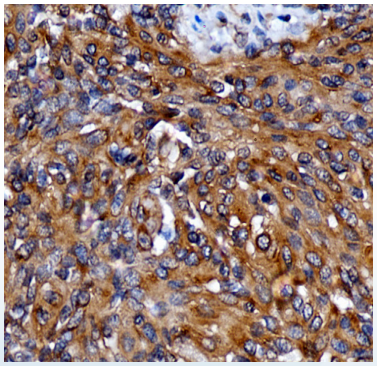
CD11b



CD11b also known as ITAM (or) Integrin alpha-M or MAC-1 alpha subunit or CR3 alpha chain is member of the integrin alpha chain family, expressed predominately in human myeloid cells, follicular dendritic cells, NK1 cells, monocytes and granulocytes. The alpha subunit of ITAM/beta-2 complex (CD11b/CD18, Mac-1), is a receptor for fibrinogen, factor X, and ICAM1. ITAM/beta-2 is implicated in adhesive interactions of monocytes, macrophages, and granulocytes. CD11b has been used as a common myeloid marker. CD11b is expressed in about 50% of acute myeloid leukemia (AML). In combination with CD117, CD11b is helpful in differentiating acute promyelocytic leukemia (CD11b negative) from recovering benign myeloid proliferation (CD11b positive, CD117 negative). In acute promyelocytic leukemia patients treated with all-trans retinoic acid or Arsenic trioxide (As2O3), CD11b is a marker for differentiating the induction of leukemia cells. CD11b is also expressed on microglia cells and involved in the development of neurodegenerative diseases.

Antibody	Clone	Localization	Catalog Family
CD11b	EP45	Membrane	AN851, AY851, NU851

SSTR2



SSTR2 (somatostatin receptor 2) is one of five 7-transmembrane G-protein-coupled receptors (GPCRs) which mediate the diverse biological actions of somatostatin (SST). These receptors coupled to tyrosine phosphatase (SSTR1,2), Ca2+ channels (SSTR2), Na+/H+ exchanger (SSTR1), PLA-2 (SSTR4), and MAP kinase (SSTR4) inhibit the activity of adenylyl cyclase via GTP binding proteins. SSTR2 give rise to two isoforms, SSTR2a and SSTR2b which are expressed in brain, stomach, intestinal epithelia, pancreatic islets and kidney tubules. SST coupled with its receptor subtypes also prevent angiogenesis and have antiproliferative effects on healthy and cancerous cells. SSTR2 expression was found on wide variety of tumors such as medulloblastoma, neuroblastomas, meningiomas, breast carcinomas and small cell lung carcinomas.

Antibody	Clone	Localization	Catalog Family
SSTR2	A-8	cytoplasm	AMC38, MUC38, AXC38

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 (Xmatrx®)
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 (Xmatrx®)
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 or call BioGenex Technical Support at **1(800)421-4149** or write to support@biogenex.com.

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