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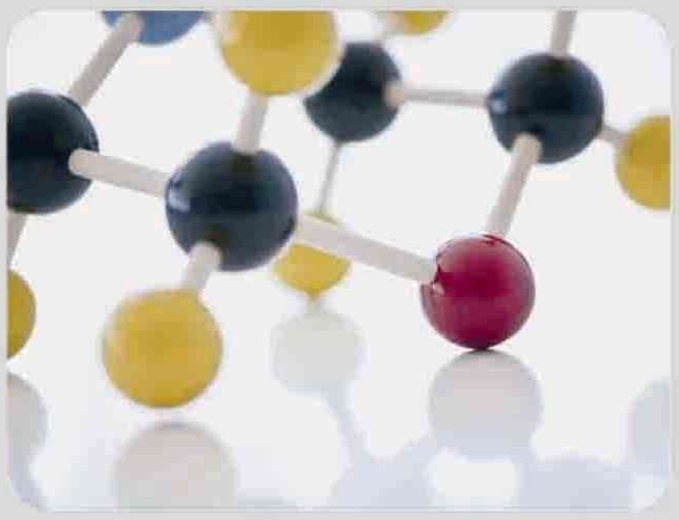
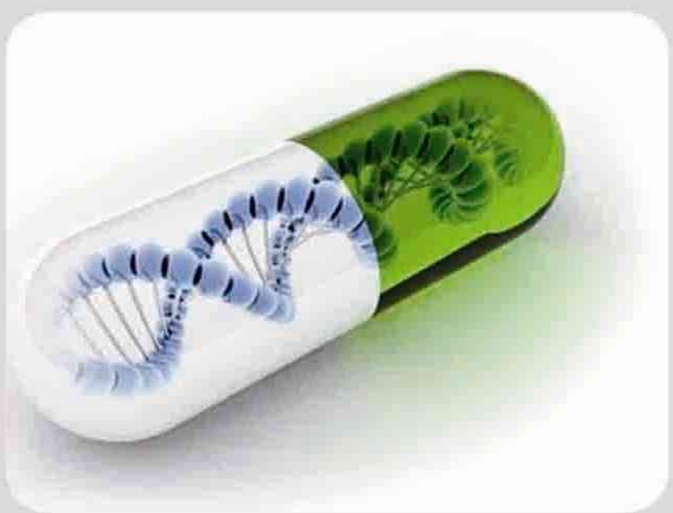


Antibodies and Kits for the Study of **Cancer**



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Signalway Antibody

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Table of contents

Application key

WB – Western blotting
IF – Immunofluorescence
IHC – Immunohistochemistry
E – ELISA (Enzyme linked immunosorbent assay)
Blocking - peptide blocking

Cancer Research

Cancer is a large class of tumors collectively. The characteristics of cancer cells are unlimited, endless proliferation nutrients and consume a lot of the patient's body. Meanwhile, the cancer cells not only invade the surrounding normal tissue but also local, even through the blood or lymphatic circulatory system throughout the body then transferred all of the body to the grow and reproduct. The formation of malignant tumors often involves changes in multiple genes, proto-oncogenes, tumor suppressor gene mutations gradually accumulated relevant. Normal cells in the body's precise regulation experience growth, division, differentiation and apoptosis in these processes, but some cells in the role by the carcinogenic factor, causing oncogenes and tumor suppressor gene mutations, cell growth and division become uncontrol and continuous split malignant proliferation cells , which is,cancer cells. The discovery of oncogenes, tumor suppressor genes, the elucidation of the cell signal pathway, which greatly enriched the understanding of the mechanisms of cell cancerous. Through the analysis of the the oncogene product - protein function, found many proteins located in different parts of the normal cell signal pathways, such as growth factors, receptors, G proteins, cytoplasmic kinase, nuclear transcription factors, which plays an important role in promotion of cell proliferation. The way of oncogene gene activation is various , including the product of protein activity enhanced cell proliferation forming tumors. The tumor suppressor gene product to inhibit cell proliferation and promote cell differentiation and inhibition of cell migration, and therefore plays a negative regulatory role. Loss of tumor suppressor genes, mutations or loss of function, which make the active role of oncogenes and cancer. In addition, some oncogenes with apoptosis is closely related to some of the tumor suppressor gene directly and is an important cell cycle regulatory factors.

Adhesion Molecules

Adhesion Molecules are proteins located on the cell surface involved in binding with other cells or with the extracellular matrix (ECM) in the process of cell adhesion or cellular interactions. Essentially, adhesion molecules help cells stick to each other and to their surroundings. Adhesion Molecules include Integrins, Ig superfamily Cell Adhesion Molecules (CAMS), Cadherins, Lectins, and others. These proteins are typically transmembrane receptors and are composed of three domains: an intracellular domain that interacts with the cytoskeleton, a transmembrane domain, and an extracellular domain.

Adhesion molecules play critical roles in a variety of biological processes. For instance, one important part adhesion molecules serve in the immune system is to enhance pairing between many less avid receptors and their ligands and transmit signals that direct specific effecter functions during an inflammatory response. In development they play key roles in tissue morphogenesis, cell migration, and axon guidance. Pathologically, adhesion molecules have been discovered to play a critical role in tumor cell invasiveness and metastases.

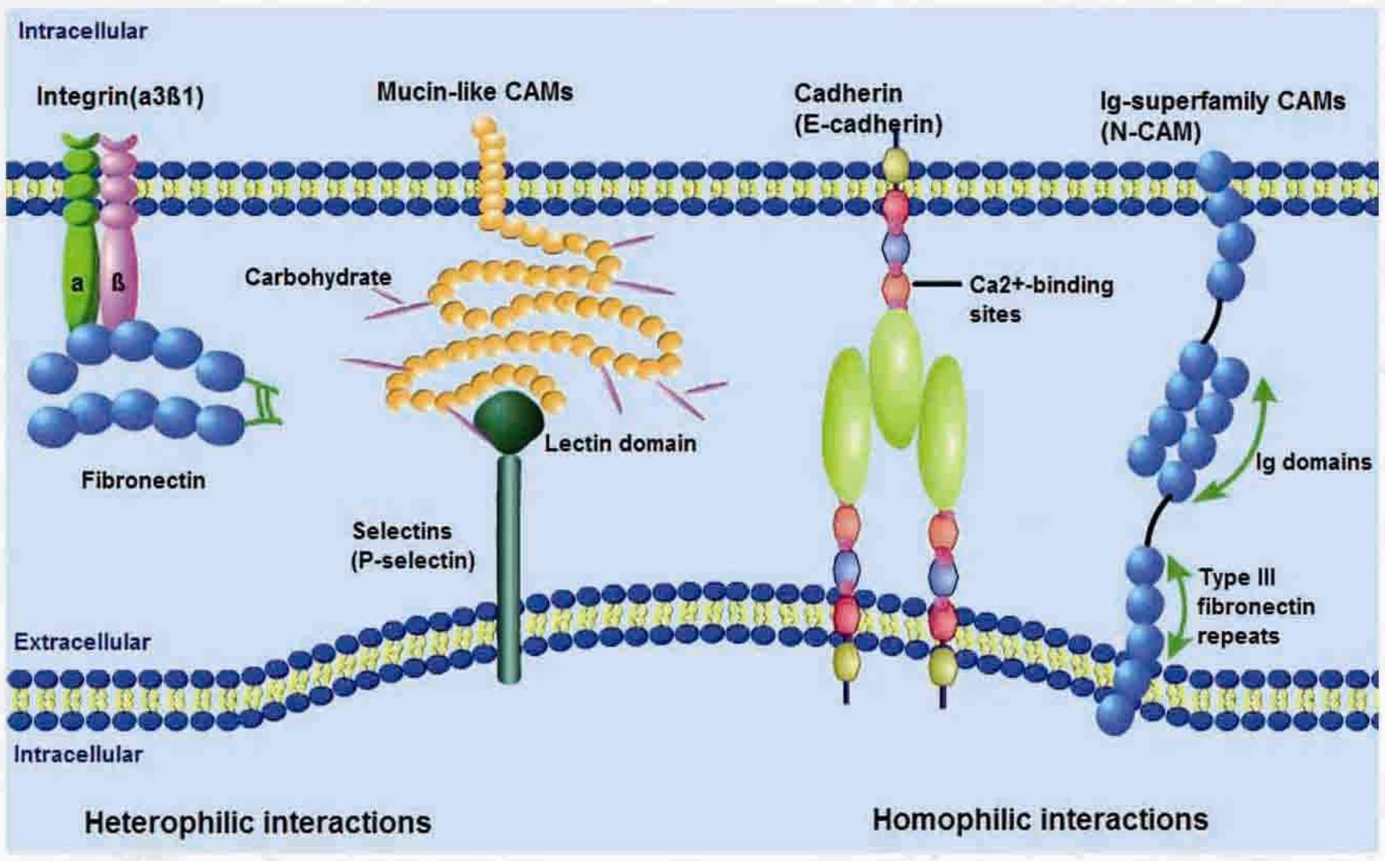
Selected Reviews:

1、Angst B. (2001)The cadherin superfamily: diversity in form and function. J Cell Sci. 114 (Pt 4): 629-41.

2、Zetter BR. (1993) Adhesion molecules in tumor metastasis. Semin Cancer Biol. 4(4):219-29.

3、Hulpiau P. (2009)Molecular evolution of the cadherin superfamily. Int. J. Biochem. Cell Biol.. 41 (2): 349-69.

4、Ikeda H. (1998) Cell adhesion molecule. Nippon Rinsho. 56(10):2493-9.

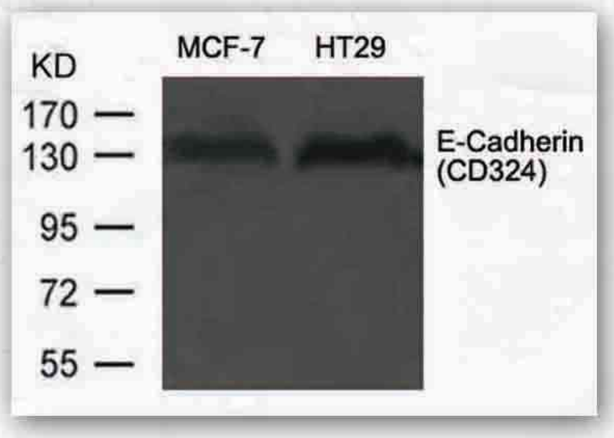


Adhesion Moluculars

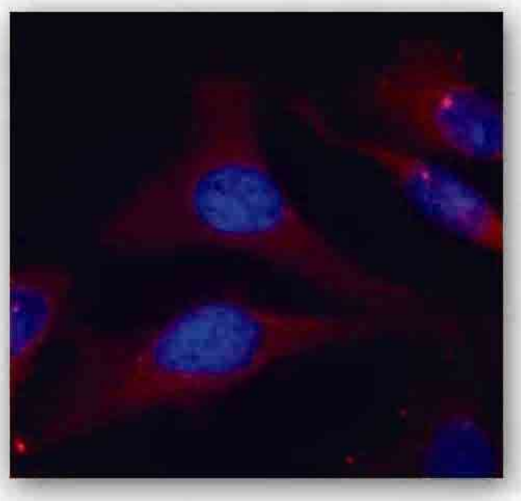
(Part of 229 adhesion molecular related products)

Cat. No.	Product name	Species Reactivity	Applications
11125	c-Abl(Phospho-Tyr412) Antibody	Hu Ms	IHC IF
21112	Caveolin-1(Ab-14) Antibody	Hu Ms Rt	WB
11090	Caveolin-1(Phospho-Tyr14) Antibody	Hu Ms Rt	WB IF
21687	Caveolin-2 Antibody	Hu	WB
21490	CD10 Antibody	Hu Ms Rt	WB
21702	CD11b Antibody	Hu Ms	WB IHC
21491	CD11c Antibody	Hu	WB
21479	CDCP1(CD318) Antibody	Hu	WB
21263	Cortactin(Ab-421) Antibody	Hu Ms	IHC
21264	Cortactin(Ab-466) Antibody	Hu Ms Rt	WB IHC
11272	Cortactin(Phospho-Tyr466) Antibody	Hu Ms	WB
21473	E-Cadherin(CD324) Antibody	Hu Ms Rt	WB
21195	Ephrin-B2(Ab-316) Antibody	Hu Ms Rt	WB
21196	Ephrin-B2(Ab-330) Antibody	Hu	WB IF
21545	FAK(Ab-576/577) Antibody	Hu Ms Rt	WB IHC
21076	FAK(Ab-861) Antibody	Hu Ms Rt	WB IHC
21148	FAK(Ab-925) Antibody	Hu Ms Rt	WB IHC IF
11545	FAK(phospho-Tyr576/Tyr577) Antibody	Hu	WB IF
11059	FAK(Phospho-Tyr861) Antibody	Hu Ms Rt	WB
11123	FAK(Phospho-Tyr925) Antibody	Hu Ms Rt	WB IF
21106	ICAM-1(Ab-512) Antibody	Hu	WB
11083	ICAM-1(Phospho-Tyr512) Antibody	Hu	WB
21614	Integrin b1(CD29) Antibody	Hu Ms Rt	WB
21082	Integrin b3(Ab-773) Antibody	Hu Ms	WB IHC
21274	Integrin b3(Ab-785) Antibody	Hu Ms Rt	WB
11060	Integrin b3(Phospho-Tyr773) Antibody	Hu Ms	WB IHC
11282	Integrin b3(Phospho-Tyr785) Antibody	Hu Ms	WB
21306	Keratin 18(Ab-33) Antibody	Hu	WB IHC
11306	Keratin 18(Phospho-Ser33) Antibody	Hu	WB IHC
21307	Keratin 8(Ab-74) Antibody	Hu	WB IHC IF
11307	Keratin 8(Phospho-Ser74) Antibody	Hu	WB IF
21616	LPAM-1(Integrin a4, CD49d) Antibody	Hu	WB
21258	Merlin(Ab-518) Antibody	Hu Ms Rt	WB IHC
11266	Merlin(Phospho-Ser518) Antibody	Hu Ms Rt	WB IF
21677	MMP-9 Antibody	Hu	WB
21474	N-Cadherin(CD325) Antibody	Hu Ms Rt	WB
21107	Paxillin(Ab-118) Antibody	Hu Ms Rt	WB IHC
21199	Paxillin(Ab-31) Antibody	Hu Rt	WB IHC
21538	Paxillin(Ab-88) Antibody	Hu	WB IF
11089	Paxillin(Phospho-Tyr118) Antibody	Hu Ms Rt	WB IHC
11201	Paxillin(Phospho-Tyr31) Antibody	Hu Ms Rt	WB
11538	Paxillin(phospho-Tyr88) Antibody	Hu	WB IF
21523	PLCg1(Ab-771) Antibody	Hu Ms Rt	WB IHC
21129	PLCg1(Ab-783) Antibody	Hu Ms Rt	WB

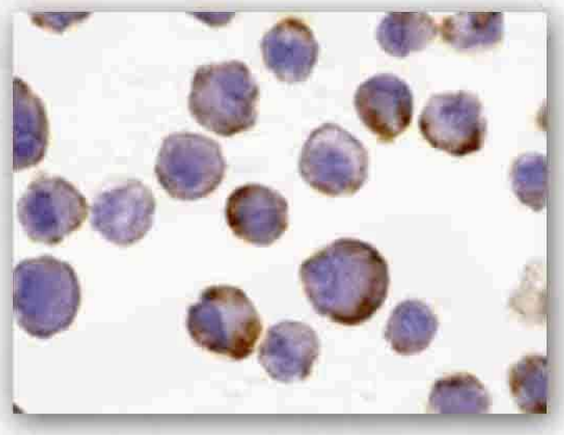
Cat. No.	Product name	Species Reactivity	Applications
11523	PLCg1(phospho-Tyr771) Antibody	Hu Ms Rt	WB IF
21524	PLC-g2(Ab-1217) Antibody	Hu Ms Rt	IHC IF
21186	PLCg2(Ab-753) Antibody	Hu Ms Rt	WB IF
11524	PLCg2(phospho-Tyr1217) Antibody	Hu Ms Rt	IHC
11175	PLCg2(Phospho-Tyr753) Antibody	Hu Ms Rt	WB IF
11103	PLCgamma1(Phospho-Tyr783) Antibody	Hu Ms Rt	WB
21405	PP2A-a Antibody	Hu Ms Rt	WB
21209	Pyk2(Ab-402) Antibody	Hu Ms Rt	WB IHC IF
11216	Pyk2(Phospho-Tyr402) Antibody	Hu Ms Rt	WB IHC IF
21318	SHP-1(Ab-536) Antibody	Hu Ms Rt	WB IHC IF
11318	SHP-1(Phospho-Tyr536) Antibody	Hu Ms Rt	IHC IF
21319	SHP-2(Ab-542) Antibody	Hu Ms Rt	WB IHC IF
21320	SHP-2(Ab-580) Antibody	Hu Ms Rt	WB IHC IF
11319	SHP-2(Phospho-Tyr542) Antibody	Hu Ms Rt	WB IHC
11320	SHP-2(Phospho-Tyr580) Antibody	Hu Ms Rt	IHC
21633	SPARC Antibody	Hu	WB
21168	Src(Ab-529) Antibody	Hu Ms Rt	WB IHC
11153	Src(Phospho-Tyr529) Antibody	Hu Ms Rt	WB IHC IF
21834	VE Cadherin Antibody	Hu Ms Rt	WB IHC
21800	β-Actin Mouse Monoclonal Antibody	H R M Mk Dg Ch Hm Rb	WB IHC IF



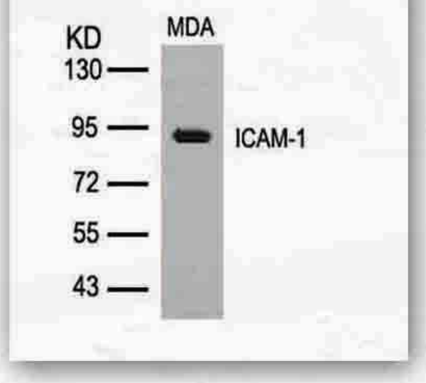
Western blot analysis of extract from MCF-7 and HT29 cells using E-Cadherin(CD324) Antibody **#21473**.



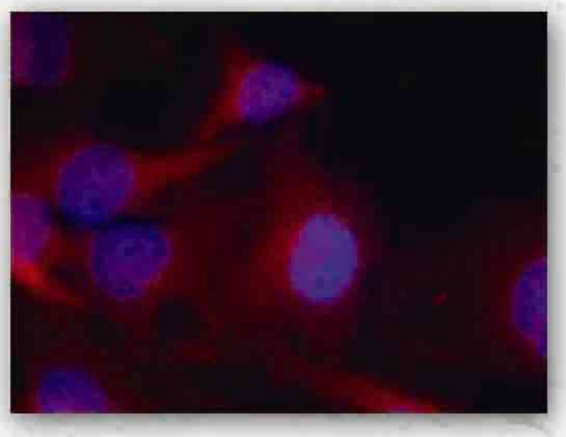
Immunofluorescence staining of methanol-fixed Hela cells using SHP-1(Phospho-Tyr536) Antibody **#11318**.



24018
Immunocytochemistry of TACE in HeLa cells with TACE antibody at 10 ug/mL.



Western blot analysis of extracts from MDA cells using ICAM-1(Ab-512) Antibody **#21106**.



Immunofluorescence staining of methanol-fixed Hela cells using PLCg2(Ab-753) Antibody **#21186**.

24338
Immunofluorescence of T-cadherin in K562 cells with T-cadherin antibody at 20 ug/mL.

Angiogenesis

Angiogenesis is the physiological process through which new blood vessels form from pre-existing vessels, and is a normal and vital process in growth and development, as well as in wound healing and in granulation tissue. Angiogenesis is regulated by multiple factors, including growth and differentiative factors, extracellular matrix components, membrane-bound receptors, intracellular signaling molecules, and angiogenesis inhibitors. Several growth factors, including FGFs (fibroblast growth factors), VEGFs (vascular endothelial growth factors), PDGFs, eprins, angiopoietins, TGF-beta and other participate in regulating angiogenesis. Angiogenesis inhibitors can be endogenous or exogenous. Endogenous angiogenesis inhibitors may be interleukins, interferons, chemokines, or growth factor regulators.

In health, the body maintains a balance of angiogenesis regulators. However, the structures formed are often functionally abnormal, possibly due to an imbalance in the angiogenic process. Imbalance of angiogenesis stimulation and inhibition can lead to disease. In cancer, like tissues of the body, tumors need a blood supply. They get this through new blood vessel formation (angiogenesis). This is a fundamental step in the transition of tumors from a dormant state to a malignant one.

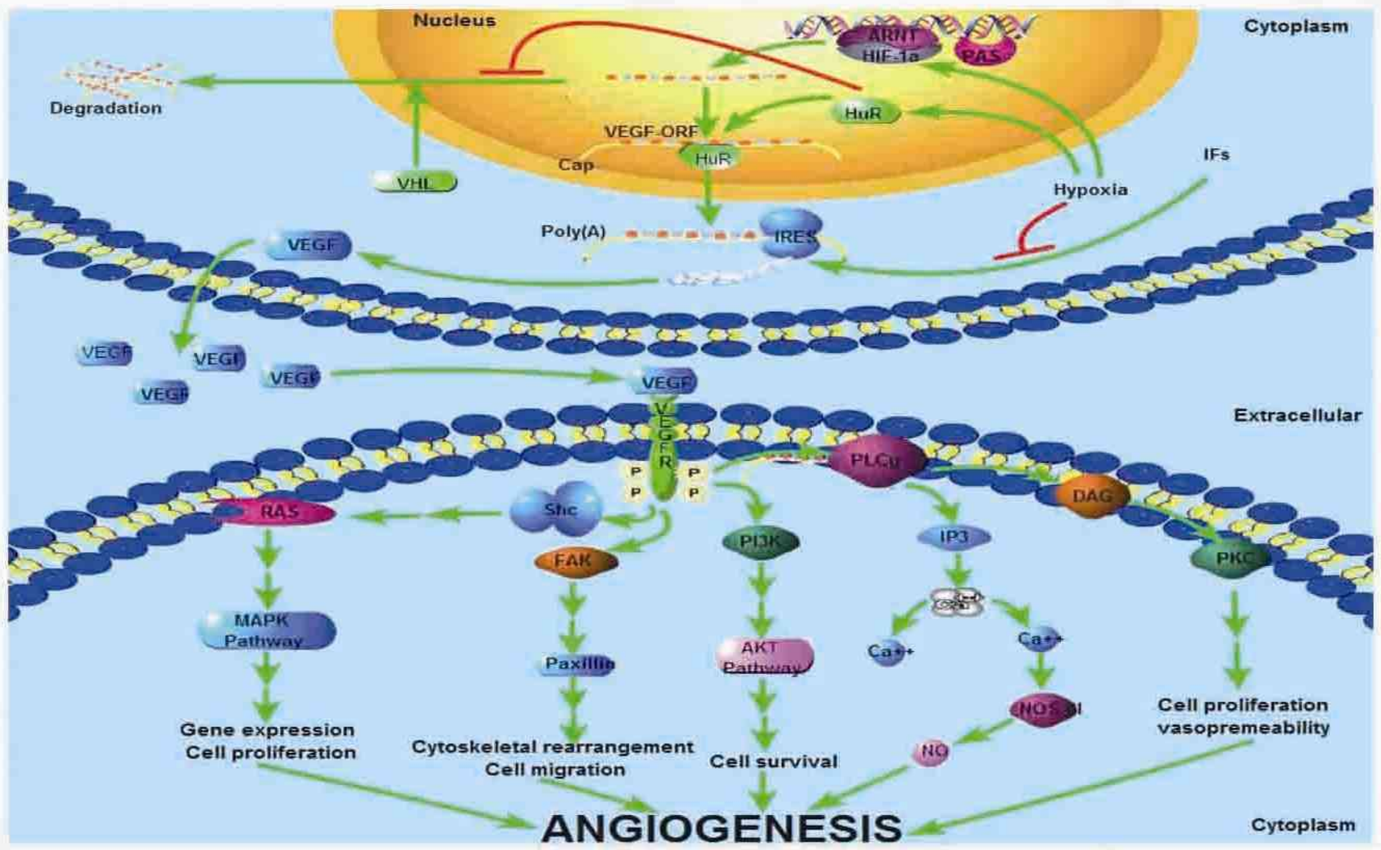
Selected Reviews:

1、Risau W. (1995) Vasculogenesis. Annual review of cell and developmental biology. 11: 73-91.

2、Carmeliet P. (2005) Angiogenesis in life, disease and medicine. Nature. 438(7070):932-6.

3、Tan A. (2010) Angiogenesis-inhibitors for metastatic thyroid cancer. Cochrane Database Syst Rev. 3:CD007958.

4、Flamme I. (1997) Molecular mechanisms of vasculogenesis and embryonic angiogenesis. Journal of cellular physiology 173 (2): 206-10.

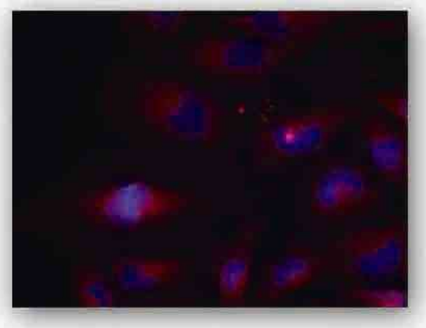


Angiogenesis

(Part of 339 angiogenesis related products)

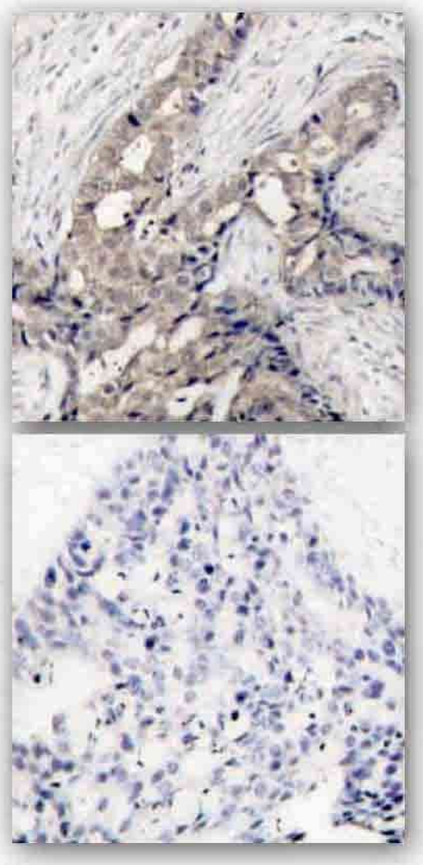
Cat. No.	Product name	Species Reactivity	Applications
11330	a-catenin(Phospho-Ser641) Antibody	Hu Ms	WB
21665	Adiponectin Antibody	Hu Ms Rt	WB
21055	Akt(Ab-308) Antibody	Hu	WB IHC
11054	Akt(Phospho-Ser473) Antibody	Hu Ms Rt	WB IHC
11124	Akt2(Phospho-Ser474) Antibody	Hu Ms Rt	WB IHC
21672	Annexin VI Antibody	Hu	WB
11218	b-Catenin(Phospho-Ser33) Antibody	Hu Ms Rt	WB IHC IF
11219	b-Catenin(Phospho-Ser37) Antibody	Hu Ms Rt	WB IHC
11116	b-Catenin(Phospho-Thr41/Ser45) Antibody	Hu	WB
21666	CCR5(CD195) Antibody	Hu	WB
21679	Cox2 Antibody	Hu	WB
21473	E-Cadherin(CD324) Antibody	Hu Ms Rt	WB
21551	EGFR(Ab-1197) Goat Polyclonal Antibody	Hu Ms Rt	WB
21222	EGFR(Ab-869) Antibody	Hu Ms Rt	WB IHC
11081	EGFR(Phospho-Tyr1092) Antibody	Hu Ms Rt	WB IHC
11551	EGFR(phospho-Tyr1197) Goat Polyclonal Antibody	Hu Ms Rt	WB
11229	EGFR(Phospho-Tyr869) Antibody	Hu Ms Rt	WB
21170	eNOS(Ab-1177) Antibody	Hu Ms Rt	WB IF

Cat. No.	Product name	Species Reactivity	Applications
21235	eNOS(Ab-495) Antibody	Hu Ms Rt	IF
11156	eNOS(Phospho-Ser1177) Antibody	Hu Ms Rt	IHC IF
21195	Ephrin-B2(Ab-316) Antibody	Hu Ms Rt	WB
21196	Ephrin-B2(Ab-330) Antibody	Hu	WB IF
21148	FAK(Ab-925) Antibody	Hu Ms Rt	WB IHC IF
11545	FAK(phospho-Tyr576/Tyr577) Antibody	Hu	WB IF
11059	FAK(Phospho-Tyr861) Antibody	Hu Ms Rt	WB
11123	FAK(Phospho-Tyr925) Antibody	Hu Ms Rt	WB IF
21231	FGF Receptor 1(Ab-154) Antibody	Hu Ms Rt	WB
21606	FGFR4 Antibody	Hu Ms Rt	WB
21070	HER2(Ab-877) Antibody	Hu	WB IHC
11079	HER2(Phospho-Tyr1248) Antibody	Hu Ms Rt	WB IHC IF
11075	HER2(Phospho-Tyr877) Antibody	Hu Ms Rt	WB IHC IF
21106	ICAM-1(Ab-512) Antibody	Hu	WB
11083	ICAM-1(Phospho-Tyr512) Antibody	Hu	WB
21754	IFN gamma Antibody	Ms Rt	WB IHC
11558	IFNAR1 Subunit1 (phospho-Ser535/Ser539) Antibody	Hu	WB
21671	IGFBP-3 Antibody	Hu	WB
11554	IL-10R subunit a(Phospho-Ser319/323) Antibody	Hu	WB
21733	IL-17 Antibody	Ms Rt	WB IHC
21274	Integrin b3(Ab-785) Antibody	Hu Ms Rt	WB
11060	Integrin b3(Phospho-Tyr773) Antibody	Hu Ms	WB IHC
11282	Integrin b3(Phospho-Tyr785) Antibody	Hu Ms	WB
11149	JAK1(Phospho-Tyr1022) Antibody	Hu Ms Rt	WB IHC
21522	Jak2(Ab-570) Antibody	Hu Rt	IHC
11151	Jak2(Phospho-Tyr1007) Antibody	Hu Ms Rt	WB IHC
11504	JNK1/JNK2/JNK3(phospho-Thr183/Tyr185) Antibody	Hu Ms Rt	WB IF
21616	LPAM-1(Integrin a4, CD49d) Antibody	Hu	WB
11294	MEK1(Phospho-Thr291) Antibody	Hu Ms Rt	WB
11205	MEK1/MEK2(Phospho-Ser217/Ser221) Antibody	Hu Ms Rt	WB IHC
21008	MEK2(Ab-394) Antibody	Hu Ms Rt	WB IHC
11585	Met (Phospho-Tyr1234/1235) Antibody	Hu Ms Rt	WB
21548	Met(Ab-1003) Antibody	Hu Ms Rt	WB IHC
21220	Met(Ab-1234) Antibody	Hu Ms Rt	WB
21230	Met(Ab-1349) Antibody	Hu Ms Rt	WB
11227	Met(Phospho-Tyr1234) Antibody	Hu Ms Rt	WB
11238	Met(Phospho-Tyr1349) Antibody	Hu Ms Rt	WB
21677	MMP-9 Antibody	Hu	WB
21474	N-Cadherin(CD325) Antibody	Hu Ms Rt	WB
21243	NFkB-p105(Ab-932) Antibody	Hu Ms Rt	WB IHC
11312	NFkB-p105(Phospho-Ser927) Antibody	Hu Ms Rt	WB IHC IF
21159	nNOS(Ab-852) Antibody	Hu Ms Rt	WB IF
21538	Paxillin(Ab-88) Antibody	Hu	WB IF

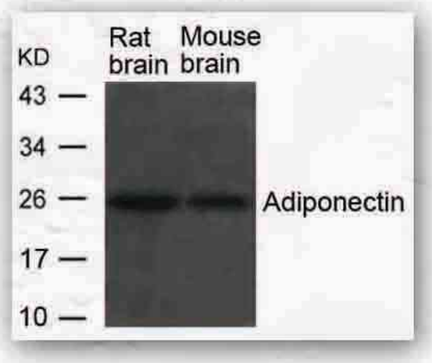


11016

Immunofluorescence staining of methanol-fixed HeLa cells using NF-κB p100/p52 (phospho-Ser870) antibody (#11016, Red).

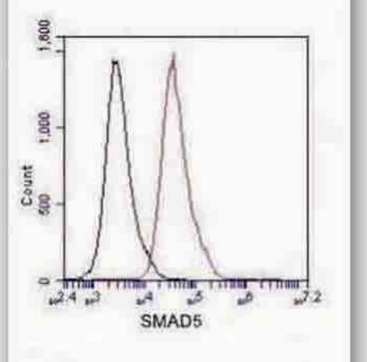


Immunohistochemical analysis of paraffin-embedded human breast carcinoma tissue using c-Abl (phospho-Tyr412) antibody **(#11125)**.

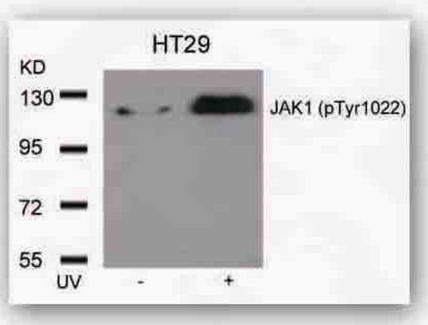


Western blot analysis of extracts from Rat and Mouse brain tissue using Adiponectin Antibody **#21665**.

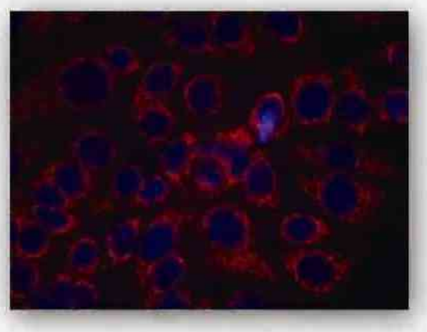
Cat. No.	Product name	Species Reactivity	Applications
11089	Paxillin(Phospho-Tyr118) Antibody	Hu Ms Rt	WB IHC
11538	Paxillin(phospho-Tyr88) Antibody	Hu	WB IF
21219	PDGF Receptor b(Ab-751) Antibody	Hu Ms Rt	WB
21584	PKCa Antibody	Hu ms Rt	WB
21288	PKCd(Ab-645) Antibody	Hu Ms Rt	WB IHC IF
11296	PKCd(Phospho-Ser645) Antibody	Hu Ms Rt	WB IHC
11173	PKCth(Phospho-Ser695) Antibody	Hu Ms Rt	WB IHC
21128	PKD/PKCm(Ab-910) Antibody	Hu Ms Rt	WB
11096	PKD/PKCm(Phospho-Ser910) Antibody	Hu Ms Rt	WB IF
11056	PTEN(Phospho-Ser380/Thr382/Thr383) Antibody	Hu Ms Rt	WB IHC IF
21202	Raf1(Ab-338) Antibody	Hu Ms	WB IHC
11006	Raf1(Phospho-Ser259) Antibody	Hu Ms Rt	WB IHC
11204	Raf1(Phospho-Ser338) Antibody	Hu Ms	WB
21241	SAPK/JNK(Ab-183) Antibody	Hu Ms Rt	WB IHC
11249	SAPK/JNK(Phospho-Thr183) Antibody	Hu Ms Rt	WB IHC
21633	SPARC Antibody	Hu	WB
21168	Src(Ab-529) Antibody	Hu Ms Rt	WB IHC
11153	Src(Phospho-Tyr529) Antibody	Hu Ms Rt	WB IHC IF
21044	STAT1(Ab-701) Antibody	Hu Ms Rt	WB IHC
21177	STAT1(Ab-727) Antibody	Hu Ms Rt	WB IHC
11163	STAT1(Phospho-Ser727) Antibody	Hu Ms Rt	WB IHC IF
21046	STAT3(Ab-727) Antibody	Hu Ms Rt	WB IHC
21048	STAT5a(Ab-694) Antibody	Hu Ms Rt	WB IHC
21049	STAT5a(Ab-780) Antibody	Hu Ms Rt	WB IHC
21701	TGF beta 1 Antibody	Hu Ms Rt	WB IHC
21678	TGF-b Antibody	Hu ms Rt	WB
21834	VE Cadherin Antibody	Hu Ms Rt	WB IHC
21631	VEGFR1 Antibody	Hu	WB
21531	VEGFR2(Ab-1059) Antibody	Hu Ms	WB
21077	VEGFR2(Ab-1175) Antibody	Hu Ms Rt	WB IHC IF
21078	VEGFR2(Ab-1214) Antibody	Hu Ms Rt	WB IHC IF
21079	VEGFR2(Ab-951) Antibody	Hu Ms Rt	WB IHC IF
11084	VEGFR2(Phospho-Tyr1175) Antibody	Hu Ms Rt	IHC IF
11085	VEGFR2(Phospho-Tyr1214) Antibody	Hu Ms Rt	WB IHC IF
11086	VEGFR2(Phospho-Tyr951) Antibody	Hu Ms Rt	WB IHC IF
21410	VEGFR3 Antibody	Hu	WB IHC IF



27047
Jurkat cells stained with SMAD5 (red, 1:100 dilution), followed by FITC-conjugated goat anti-mouse IgG. Black line histogram represents the isotype control, normal mouse IgG.



Western blot analysis of extracts from HT29 cells untreated or treated with UV using JAK1(Phospho -Tyr1022) Antibody **#11149**.



Immunofluorescence staining of methanol-fixed MCF7 cells using HER2(Phospho-Tyr1248) Antibody **#11079**.

Apoptosis

Apoptosis is a naturally occurring process by which a cell is directed to Programmed Cell Death. Apoptosis is based on a genetic program that is an indispensable part of the development and function of an organism and is a regulated physiological process leading to cell death.

In apoptosis pathways, signaling results in the activation of a family of Cysteine Proteases, named Caspases that act in a proteolytic cascade to dismantle and remove the dying cell, are central regulators of apoptosis. Initiator caspases (including 8, 9, 10) are closely coupled to pro-apototic signals. Once activated, these caspases cleave and activate downstream effector caspases (3, 6, 7) which in turn cleave cytoskeletal and nuclear proteins and induce apoptosis. Cytochrome C released from damaged mitochondria is coupled to the activation of caspase 9.

Pro-apoptotic stimuli include the FasL, TNF, DNA damage. Fas and TNFR activate caspases 8 and 10; DNA damage leads to the activation of caspase 9. Anti-apoptotic ligands including growth factors and cytokines activate AKT and p90RSK, which inhibit Bad and prevent cytochrome C release. TNFR can also stimulate an anti-apoptotic pathway by inducing IAP, which directly inhibits caspases 3, 7 and 9.

Alternatively, apoptosis is inhibited via an adaptor protein complex which activates NF-kB and induces survival genes including IAP. The Bcl-2 family of proteins regulate apoptosis by controlling mitochondrial permeability and the release of cytochrome C. The anti-apoptotic proteins Bcl-2 and Bcl-xL reside in the outer mitochondrial wall and inhibit cytochrome C release. The pro- apoptotic Bcl-2 proteins Bad, Bid, Bax and Bim reside in the cytosol but translocate to mitochondria following death signaling, where they promote the release of cytochrome C. Bad translocates to mitochondria and forms a pro-apoptotic complex with Bcl-xL. This translocation is inhibited by survival factors that induce the phosphorylation of Bad, leading to its cytosolic sequestration. Bax and Bim translocate to mitochondria in response to death stimuli, including survival factor withdrawal. Bcl-xL, Bcl-2 and Bax apparently influence the voltage-dependent anion channel (VDAC), which can control cytochrome C release. p53, activated following DNA damage, induces the transcription of Bax. Released cytochrome C binds Apaf1 and forms an activation complex with caspase9.

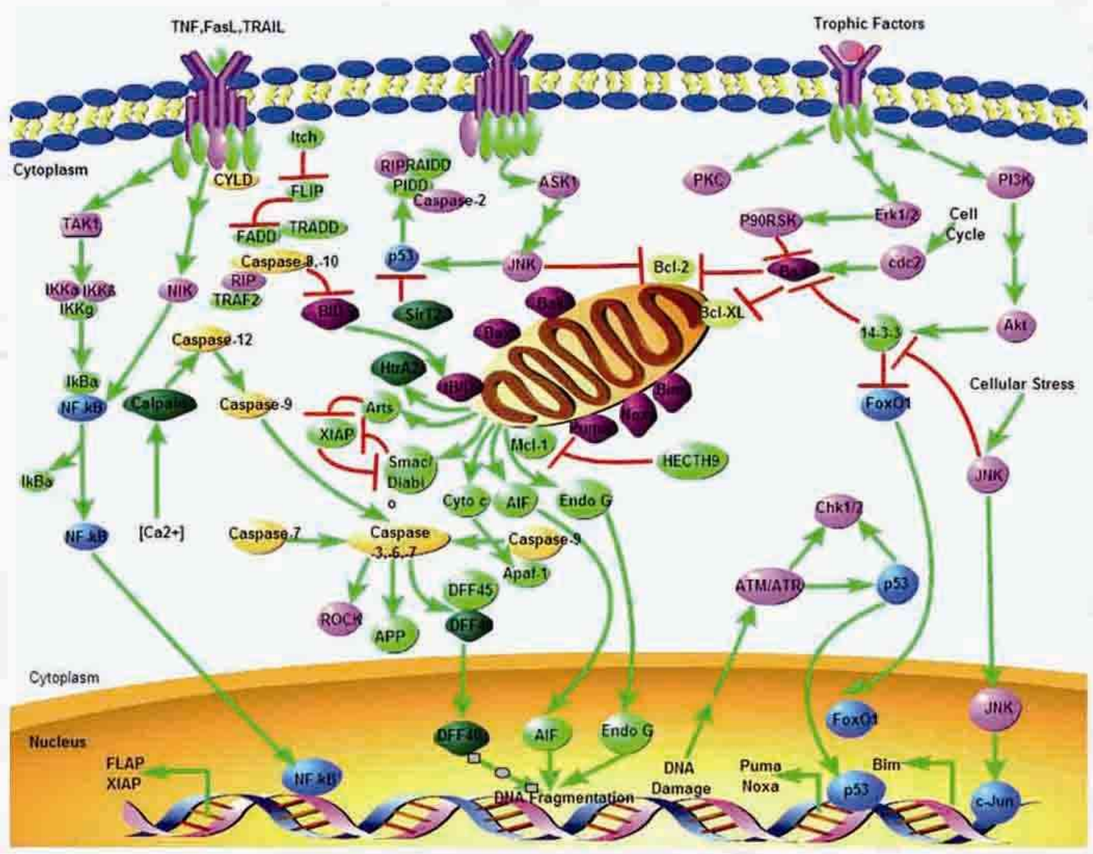
Selected Reviews:

1、Alberts Bruce (2008) Chapter 18 Apoptosis: Programmed Cell Death Eliminates Unwanted Cells. Molecular Biology of the Cell (textbook) (5th ed.). Garland Science. p. 1115. ISBN 978-0-8153-4105-5.

2、Czerski L. (2004) Apoptosome formation and Caspase activation:is it different in the heart. J Mol Cardiol.37(13),643-652.

3、Debatin K.M.(2004) Death receptors in chemotherapy and cancer. Oncogene 23(16), 2950-66.

4、Lamkanfi M. (2007) Caspases in cell survival, proliferation and differentiation. Cell Death and Differentiation 14 (1): 44-55.



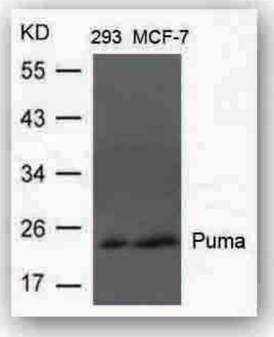
Apoptosis

(Part of 559 apoptosis related products)

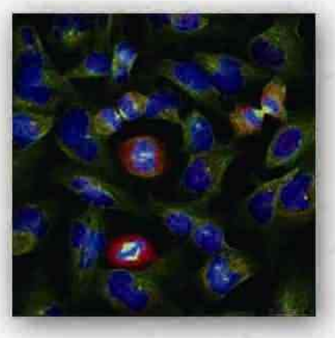
Cat. No.	Product name	Species Reactivity	Applications
21188	14-3-3z(Ab-58) Antibody	Hu Ms Rt	WB IHC
11181	14-3-3z(Phospho-Ser58) Antibody	Hu Ms Rt	WB IHC IF
21502	AKT1(Ab-450) Antibody	Hu Ms Rt	WB IHC IF
11502	AKT1(phospho-Thr450) Antibody	Hu Ms Rt	WB IHC IF
11124	Akt2(Phospho-Ser474) Antibody	Hu Ms Rt	WB IHC
11174	AMPKa1(Phospho-Ser487)Antibody	Hu Ms Rt	WB IHC IF
21672	Annexin VI Antibody	Hu	WB
11178	ASK1(Phospho-Ser83) Antibody	Hu	WB IHC
21147	ATM(Ab-1981) Antibody	Hu Ms	WB IF
11122	ATM(Phospho-Ser1981) Antibody	Hu	WB IHC
21505	ATR(Ab-428) Antibody	Hu	IHC
21064	BAD(Ab-155) Antibody	Hu Ms Rt	WB IHC

Cat. No.	Product name	Species Reactivity	Applications
11067	BAD(Phospho-Ser112) Antibody	Hu Ms Rt	WB IHC
11068	BAD(Phospho-Ser136) Antibody	Ms	WB IHC
21059	BCL-2(Ab-56) Antibody	Hu	WB IHC IF
21060	BCL-2(Ab-70) Antibody	Hu	WB IHC IF
11066	BCL-XL(Phospho-Ser62) Antibody	Hu Ms Rt	WB IHC IF
21582	Beclin-1 Antibody	Hu	WB
21280	BIM(Ab-69) Antibody	Hu Ms Rt	WB IHC
11288	BIM(Phospho-Ser69) Antibody	Hu Ms Rt	IHC IF
21667	C-Fos Antibody	Hu Ms Rt	WB
21022	c-Jun(Ab-93) Antibody	Hu Ms Rt	WB IHC
11022	c-Jun(Phospho-Thr93) Antibody	Hu Ms Rt	WB IHC
11023	c-Jun(Phospho-Tyr170) Antibody	Hu Ms Rt	WB
21679	Cox2 Antibody	Hu	WB
21680	Cytochrome C Antibody	Hu ms Rt	WB
21646	E2F-1 Antibody	Hu Ms	WB
21657	E2F-2 Antibody	Hu Ms	WB
11279	eIF2a(Phospho-Ser51) Antibody	Hu Ms Rt	WB IHC IF
21513	eIF4B(Ab-422) Antibody	Hu	WB IHC
11513	eIF4B(phospho-Ser422) Antibody	Hu Ms	WB IHC
11233	eIF4E(Phospho-Ser209) Antibody	Hu	WB IHC IF
11514	eIF4G(phospho-Ser1232) Antibody	Hu	WB IHC
11156	eNOS(Phospho-Ser1177) Antibody	Hu Ms Rt	IHC IF
11545	FAK(phospho-Tyr576/Tyr577) Antibody	Hu	WB IF
21612	GAPDH Antibody	Hu Ms Rt	WB
11164	HSP27(Phospho-Ser15) Antibody	Hu	WB IHC IF
11248	HSP27(Phospho-Ser82) Antibody	Hu	WB IHC
11196	HSP90B(Phospho-Ser254) Antibody	Hu Ms Rt	WB
21106	ICAM-1(Ab-512) Antibody	Hu	WB
11083	ICAM-1(Phospho-Tyr512) Antibody	Hu	WB
11152	IkB-a(Phospho-Ser32/Ser36) Antibody	Hu Ms Rt	WB IHC IF
11304	IkB-b(Phospho-Ser23) Antibody	Hu Ms Rt	IHC
11213	IkB-e(Phospho-Ser22) Antibody	Hu Ms	WB IHC
11149	JAK1(Phospho-Tyr1022) Antibody	Hu Ms Rt	WB IHC
11151	Jak2(Phospho-Tyr1007) Antibody	Hu Ms Rt	WB IHC
11504	JNK1/JNK2/JNK3(phospho-Thr183/Tyr185) Antibody	Hu Ms Rt	WB IF
11026	JunB(Phospho-Ser79) Antibody	Hu Ms Rt	IHC IF
11028	JunD(Phospho-Ser255) Antibody	Hu Ms Rt	WB IHC
21402	LC3a Antibody	Hu Ms Rt	WB IF
11550	MDM2(phospho-Ser166) Antibody	Hu	WB IHC IF
11161	MEK1(Phospho-Ser221) Antibody	Hu Ms Rt	WB IHC IF
21203	MEK1/MEK2(Ab-217/221) Antibody	Hu Ms Rt	WB IHC IF
11205	MEK1/MEK2(Phospho-Ser217/Ser221) Antibody	Hu Ms Rt	WB IHC
21625	MELK Antibody	Hu Ms Rt	WB
21198	MSK1(Ab-376) Antibody	Hu Ms Rt	WB

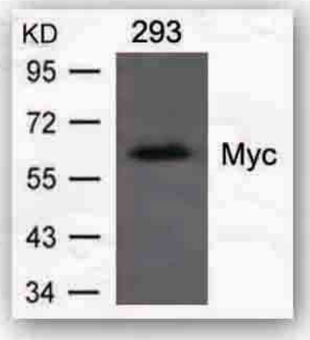
Cat. No.	Product name	Species Reactivity	Applications
11036	Myc(Phospho-Ser373) Antibody	Hu Ms Rt	WB IHC
11034	Myc(Phospho-Thr58) Antibody	Hu Ms Rt	WB IHC
21297	NFkB-p100/p52(Ab-872) Antibody	Hu Ms	WB IHC IF
11312	NFkB-p105(Phospho-Ser927) Antibody	Hu Ms Rt	WB IHC IF
11251	NFkB-p105(Phospho-Ser932) Antibody	Hu Ms Rt	WB IHC
21017	NFkB-p105/p50(Ab-337) Antibody	Hu Ms Rt	WB IHC
21014	NFkB-p65(Ab-536) Antibody	Hu Ms Rt	WB IHC
11166	NFkB-p65(Phospho-Thr505) Antibody	Hu	WB IHC
11018	NFκB-p105/p50(Phospho-Ser893) Antibody	Hu	IHC IF
11011	NFκB-p65(Phospho-Ser276) Antibody	Hu Ms Rt	WB IHC IF
11013	NFκB-p65(Phospho-Ser468) Antibody	Hu Ms Rt	WB IF
21159	nNOS(Ab-852) Antibody	Hu Ms Rt	WB IF
11581	P38 MAPK(Phospho-Thr180/Tyr182) Antibody	Hu ms Rt	WB
11246	p44/42 MAP Kinase(Phospho-Tyr204) Antibody	Hu Ms Rt	WB IHC IF
21084	p53(Ab-9) Antibody	Hu Ms Rt	WB
11099	p53(Phospho-Ser46) Antibody	Hu	WB IF
11092	p53(Phospho-Ser6) Antibody	Hu Ms	WB IHC
11095	p53(Phospho-Thr18) Antibody	Hu	WB
11284	p70 S6 Kinase(Phospho-Ser424) Antibody	Hu Ms Rt	WB IHC IF
11508	PI3K P85(phospho-Tyr467) Antibody	Hu Ms Rt	WB
11056	PTEN(Phospho-Ser380/Thr382/Thr383) Antibody	Hu Ms Rt	WB IHC IF
21688	Puma Antibody	Hu	WB
21209	Pyk2(Ab-402) Antibody	Hu Ms Rt	WB IHC IF
11216	Pyk2(Phospho-Tyr402) Antibody	Hu Ms Rt	WB IHC IF
11006	Raf1(Phospho-Ser259) Antibody	Hu Ms Rt	WB IHC
11204	Raf1(Phospho-Ser338) Antibody	Hu Ms	WB
21020	Rel(Ab-503) Antibody	Hu	IF
11020	Rel(Phospho-Ser503) Antibody	Hu	IF
11255	RelB(Phospho-Ser573) Antibody	Hu Ms	WB IHC
21225	S6 Ribosomal Protein(Ab-235) Antibody	Hu Ms Rt	WB IHC IF
11176	SEK1/MKK4(Phospho-Thr261) Antibody	Hu Ms Rt	IHC IF



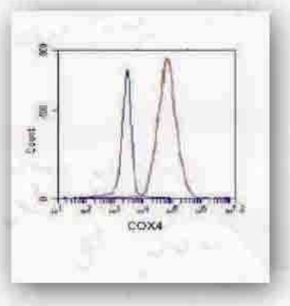
Western blot analysis of extracts from 293 and MCF-7 cells using Puma Antibody **#21688**.



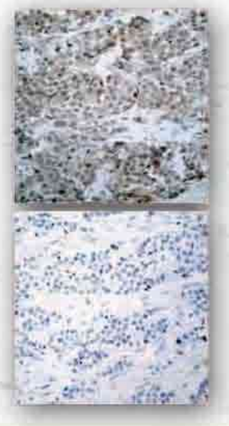
Immunofluorescence staining of methanol-fixed HeLa cells using BCL-XL (phospho-Ser62) antibody (**#11066**, Red).



Western blot analysis of extracts from 293 cells transfected with recombinant human Myc using Myc mouse mAb **#21390**.



27080
K562 cells stained with COX4 (red, 1:100 dilution), followed by FITC-conjugated goat anti-mouse IgG. Blue line histogram represents the isotype control, normal mouse IgG.



Immunohistochemical analysis of paraffin-embedded human breast carcinoma tissue using BAD(Phospho-Ser112) Antibody **#11067**(left) or the same antibody preincubated with blocking peptide(right).

Immunofluorescence staining of methanol-fixed Hela cells using IkB-a (Phospho-Ser32/Ser36) Antibody **#11152**.

Cancer Biomarkers

Cancer biomarkers are substances indicate that tumor state, progression characteristics, and response to therapies. Most cancer biomarkers are transcription factors, cell surface receptors, or secreted proteins that are produced by either cancer cells or other cells in response to cancer. They are present in tumor tissues or body fluids. Cancer biomarkers can be used for screening the general population, for differential diagnosis in symptomatic patients, and for clinical staging of cancer. Additionally, cancer biomarkers can be used to estimate tumor volume, to evaluate response to treatment, to assess disease recurrence through monitoring, or as prognostic indicators of disease progression. During the last decade, improved understanding of carcinogenesis and tumor progression has revealed a large number of potential cancer markers. It is predicted that even more will be discovered in the near future with the application of the new emerging genomics and proteomics technologies.

Selected Reviews:

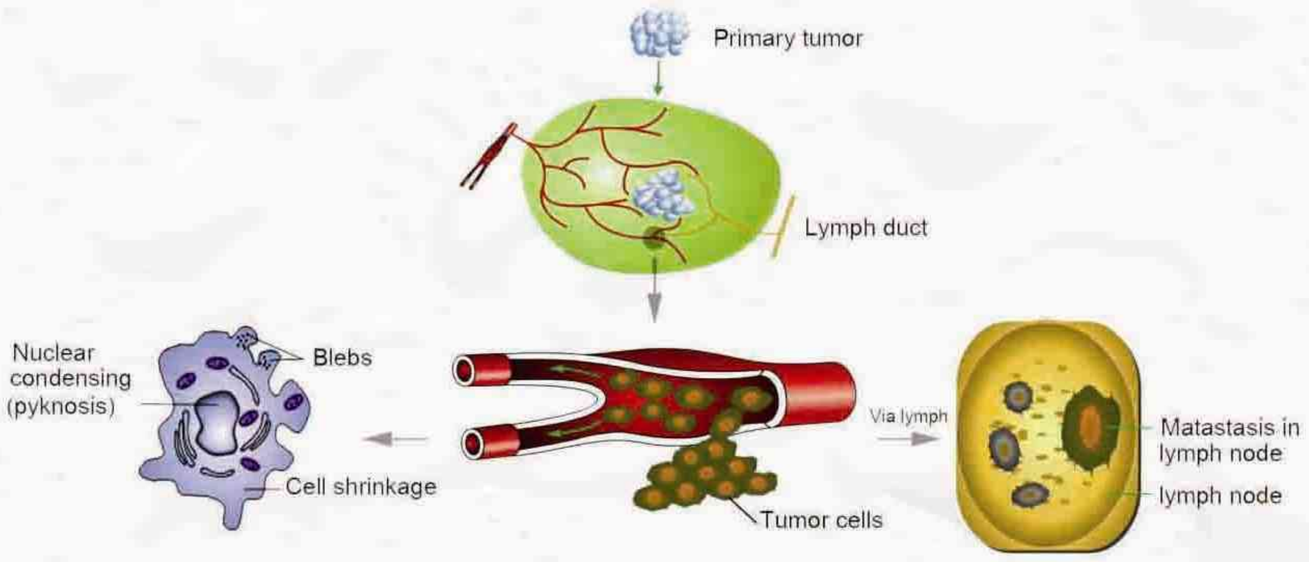
1、Ludwig JA(2005) Biomarkers in cancer staging, prognosis and treatment selection. Nat. Rev. Cancer 5 (11): 845-56.

2、Kulasingam V, et al. (2007) Tissue culture-based breast cancer biomarker discovery platform. Int J Cancer. 123(9):2007-12.

3、Singer E. A.(2007) PSA Screening and Elderly Men. JAMA 297 (9): 949.

4、Jacobs Jon M.(2005) Utilizing Human Blood Plasma for Proteomic Biomarker Discovery. Journal of Proteome Research 4 (4): 1073-85.

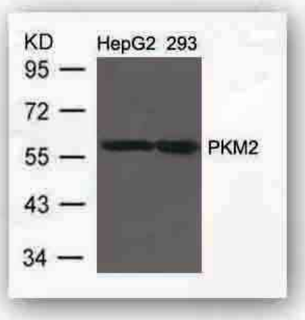
Cancer Evolution



(part of 218 cancer biomarker related products)

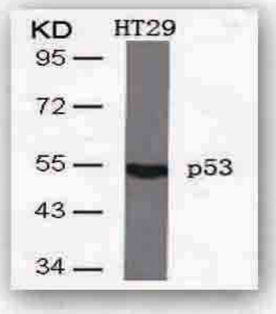
Cat. No.	Product name	Species Reactivity	Applications
21530	ABL1/2(Ab-393/429) Antibody	Hu Ms	WB
21574	b-catenin Antibody	Hu	WB
21059	BCL-2(Ab-56) Antibody	Hu	WB IHC IF
21139	BRCA1(Ab-1524) Antibody	Hu	WB IF
21112	Caveolin-1(Ab-14) Antibody	Hu Ms Rt	WB
21687	Caveolin-2 Antibody	Hu	WB
21500	CCR7(CD197) Antibody	Hu	WB
21490	CD10 Antibody	Hu Ms Rt	WB
21492	CD22 Antibody	Hu	WB
21481	CD31(PECAM1) Antibody	Hu	WB
21622	CD3E Antibody	Hu Ms Rt	WB
21479	CDCP1(CD318) Antibody	Hu	WB
21644	Cdx2 Antibody	Hu Ms Rt	WB
21667	C-Fos Antibody	Hu Ms Rt	WB
21539	c-kit(Ab-936) Antibody	Hu	WB IHC
21263	Cortactin(Ab-421) Antibody	Hu Ms	IHC
21679	Cox2 Antibody	Hu	WB
21193	EGFR(Ab-678) Antibody	Hu Ms Rt	WB
21222	EGFR(Ab-869) Antibody	Hu Ms Rt	WB IHC
21068	Estrogen Receptor-a(Ab-167) Antibody	Hu Ms	WB IHC IF
21094	Ezrin(Ab-353) Antibody	Hu Ms Rt	WB
21605	Fatty Acid Synthase(FASN) Antibody	Hu Ms Rt	WB
21231	FGF Receptor 1(Ab-154) Antibody	Hu Ms Rt	WB

Cat. No.	Product name	Species Reactivity	Applications
21070	HER2(Ab-877) Antibody	Hu	WB IHC
21509	Her3/ErbB3(Ab-1289) Antibody	Hu	IF
21144	HSP27(Ab-15) Antibody	Hu	WB IHC
21290	HSP90B(Ab-254) Antibody	Hu Ms Rt	WB IHC IF
21671	IGFBP-3 Antibody	Hu	WB
21026	JunB(Ab-79) Antibody	Hu Ms Rt	IHC IF
21028	JunD(Ab-255) Antibody	Hu Ms Rt	WB IHC IF
21306	Keratin 18(Ab-33) Antibody	Hu	WB IHC
21626	LIN28B Antibody	Hu	WB
21677	MMP-9 Antibody	Hu	WB
21035	Myc(Ab-358) Antibody	Hu Ms Rt	WB IHC
21487	NSE Antibody	Hu Ms	WB
21083	p53(Ab-6) Antibody	Hu Ms Rt	WB
21084	p53(Ab-9) Antibody	Hu Ms Rt	WB
21219	PDGF Receptor b(Ab-751) Antibody	Hu Ms Rt	WB
21578	PKM2 Antibody	Hu	WB
21069	Progesterone Receptor(Ab-190) Antibody	Hu Ms Rt	WB IF
21057	PTEN(Ab-370) Antibody	Hu Ms Rt	WB IHC
21824	S100B Antibody	Hu Ms Rt	WB IHC
21241	SAPK/JNK(Ab-183) Antibody	Hu Ms Rt	WB IHC
21633	SPARC Antibody	Hu	WB
21168	Src(Ab-529) Antibody	Hu Ms Rt	WB IHC
21701	TGF beta 1 Antibody	Hu Ms Rt	WB IHC
21617	Tubulin b-III Antibody	Hu Ms	WB
21488	Vimentin Antibody	Hu Ms Rt	WB IF
21547	ZAP70(Ab-292) Antibody	Hu ms Rt	WB

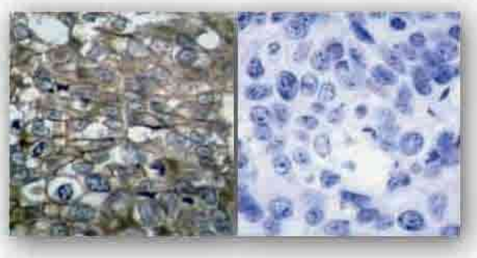


Western blot analysis of extracts from HepG2 and 293 cells using PKM1/2 Antibody #**21578**.

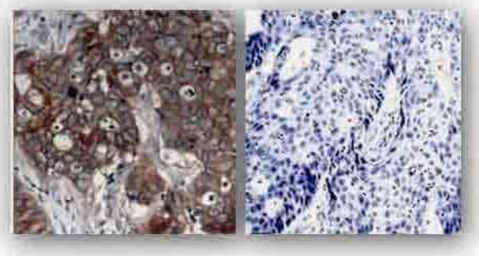
24092
Immunocytochemistry of Survivin in Jurkat cells with Survivin antibody at 5 ug/mL.



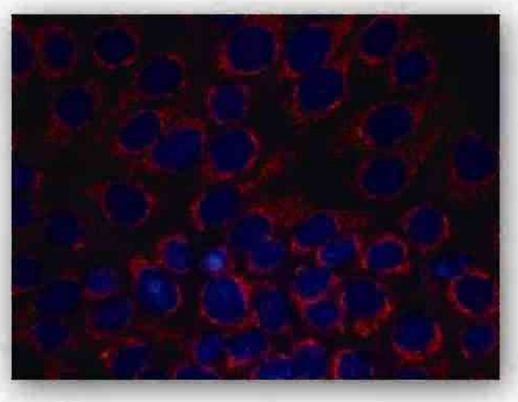
Western blot analysis of extracts from HT29 cells using p53(Ab-46) Antibody #**21090**.



Immunohistochemical analysis of paraffin-embedded human breast carcinoma tissue using EGFR(Ab-869) Antibody #**21222**(left) or the same antibody preincubated with blocking peptide(right).



Immunohistochemical analysis of paraffin-embedded human breast carcinoma tissue using HER2(Ab-877) Antibody #**21070**(left) or the same antibody preincubated with blocking peptide(right).



Immunofluorescence staining of methanol-fixed MCF7 cells using HER2(Ab-1248) Antibody #**21072**.

Cancer Stem Cell Markers

Cancer stem cells (CSCs) are cancer cells found within tumors or hematological cancers that possess characteristics associated with normal stem cells, specifically the ability to give rise to all cell types found in a particular cancer sample. CSCs are therefore tumorigenic (tumor-forming), perhaps in contrast to other non-tumorigenic cancer cells. CSCs may generate tumors through the stem cell processes of self-renewal and differentiation into multiple cell types. Such cells are proposed to persist in tumors as a distinct population and cause relapse and metastasis by giving rise to new tumors. Therefore, development of specific therapies targeted at CSCs holds hope for improvement of survival and quality of life of cancer patients, especially for sufferers of metastatic disease.

A number of studies have focused on identifying specific cancer stem cell markers. Pancreatic cancer stem cells express the surface markers CD44, CD24 and epithelial specific antigen (ESA). It has also been identified that liver progenitor cells share molecular markers with adult hepatocytes and fetal hepatocytes. In addition, markers frequently used to identify adult stem cells within the prostate, breast and intestine include CD44, CD133, ESA, CD69, p63, as well as some stem cell antigen, such as CD34, c-kit, Flt-3, NCAM, and Thy-1.

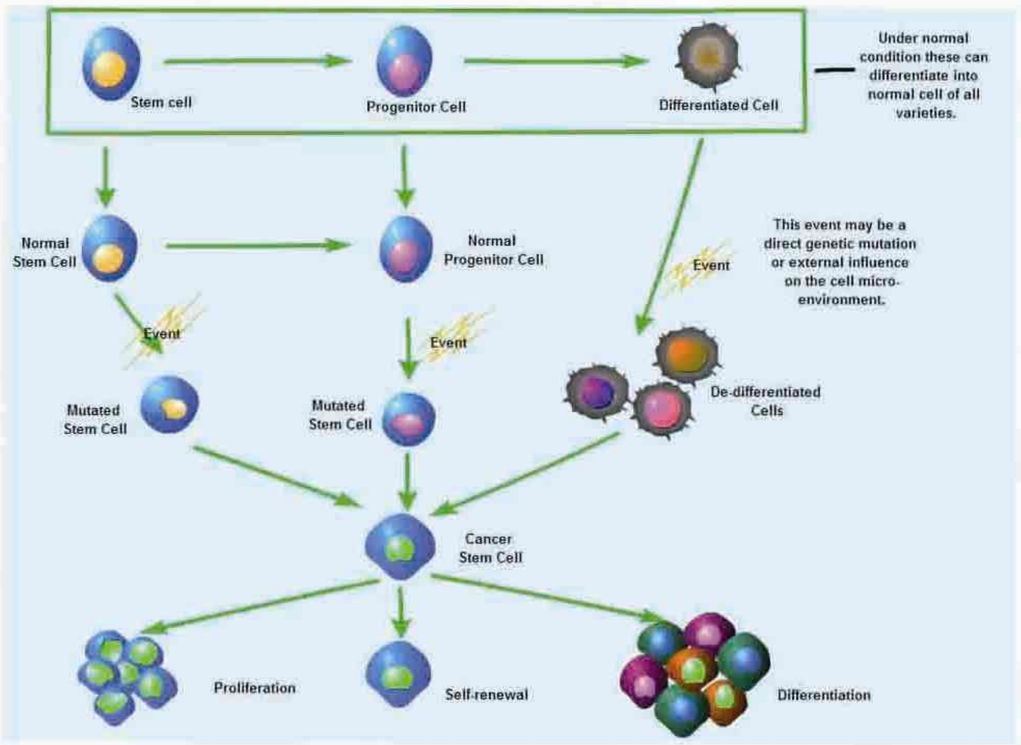
Selected Reviews:

1、Gupta PB (2009) Cancer stem cells: mirage or reality?. Nat Med 15 (9): 1010-2.

2、Singh SK (2003) Identification of a cancer stem cell in human brain tumors. Cancer Research 63 (18): 5821-8

3、Li C (2007) Identification of pancreatic cancer stem cells. Cancer Research 67 (3): 1030-7

4、Dingli D. (2006) Successful therapy must eradicate cancer stem cells. Stem Cells 24, 2603-10.



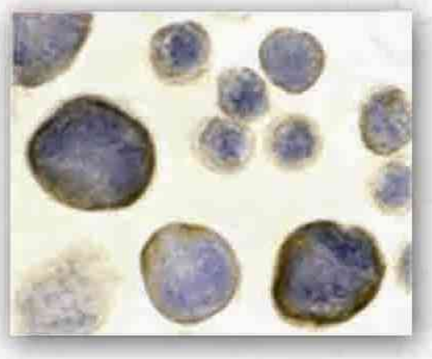
Cancer Stem Cell

Cat. No.	Product name	Species Reactivity	Applications
Bladder Cancer Stem Cell Markers			
22981	CD44 antigen isoform 4 Antibody	Hu	WB IHC IF
Breast Cancer Stem Cell Markers			
24002	CXCR4 Antibody	Hu Ms	E WB ICC IP IF FC
24003	CXCR4 Antibody	Hu Ms	E WB
24624	CXCR4-Lo Antibody	Hu	E WB ICC
22981	CD44 antigen isoform 4 Antibody	Hu	WB IHC IF
24394	BMI-1 Antibody	Hu Ms Rt	E WB ICC
27030	EPCAM Monoclonal Antibody	Hu Ms	WB
21071	HER2(Ab-1221/1222) Antibody	Hu	WB IHC IF
21072	HER2(Ab-1248) Antibody	Hu Ms Rt	WB IHC IF
23027	Integrin alpha6 Antibody	Hu	WB
21057	PTEN(Ab-370) Antibody	Hu Ms Rt	WB IHC
21056	PTEN(Ab-380/382/383) Antibody	Hu Ms Rt	WB IHC
Colon Cancer Stem Cell Markers			
22981	CD44 antigen isoform 4 Antibody	Hu	WB IHC IF
27030	EPCAM Monoclonal Antibody	Hu Ms	WB
Gastric Cancer Stem Cell Markers			
22981	CD44 antigen isoform 4 Antibody	Hu	WB IHC IF

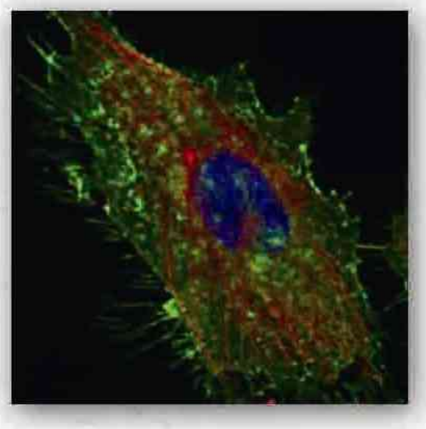
Cat. No.	Product name	Species Reactivity	Applications
Glioma/Medulloblastoma Cancer Stem Cell Markers			
24878	TNFAIP3 Antibody	Hu Ms Rt	E WB IHC
24884	TNFAIP3 Antibody	Hu Ms Rt	E WB IHC
21476	ABCG2(CD338) Antibody	Hu Ms Rt	WB
24058	CX3CL1 Antibody	Hu Ms	E WB
24002	CXCR4 Antibody	Hu Ms	E WB ICC IP IF FC
24003	CXCR4 Antibody	Hu Ms	E WB
24624	CXCR4-Lo Antibody	Hu	E WB ICC
23027	Integrin alpha6 Antibody	Hu	WB
21390	Myc Mouse Monoclnal Antibody	Hu Ms Rt	WB
21034	Myc(Ab-58) Antibody	Hu Ms Rt	WB IHC
29140	Nestin Antibody	Hu	WB IHC
29141	Nestin Antibody	Ms Rt	WB IHC
29024	Podoplanin / gp36 Antibody	Hu	WB IHC
29025	Podoplanin / gp36 Antibody	Ms Rt	WB IHC
Head & Neck Cancer Stem Cell Markers			
21476	ABCG2(CD338) Antibody	Hu Ms Rt	WB
24394	BMI-1 Antibody	Hu Ms Rt	E WB ICC
22981	CD44 antigen isoform 4 Antibody	Hu	WB IHC IF
Leukemia Cancer Stem Cell Markers			
24394	BMI-1 Antibody	Hu Ms Rt	E WB ICC
22981	CD44 antigen isoform 4 Antibody	Hu	WB IHC IF
21232	c-Kit(Ab-721) Antibody	Hu Ms Rt	WB
21539	c-kit(Ab-936) Antibody	Hu	WB IHC
Liver Cancer Stem Cell Markers			
25163	AFP Antibody	Hu Ms Rt	E WB IHC
21258	Merlin(Ab-518) Antibody	Hu Ms Rt	WB IHC
Lung Cancer Stem Cell Markers			
21476	ABCG2(CD338) Antibody	Hu Ms Rt	WB
27030	EPCAM Monoclonal Antibody	Hu Ms	WB
21232	c-Kit(Ab-721) Antibody	Hu Ms Rt	WB
21539	c-kit(Ab-936) Antibody	Hu	WB IHC
Melanoma Cancer Stem Cell Markers			
23628	ABCB5 Antibody	Hu Ms Rt	WB IHC
21476	ABCG2(CD338) Antibody	Hu Ms Rt	WB
29140	Nestin Antibody	Hu	WB IHC
29141	Nestin Antibody	Ms Rt	WB IHC
24342	NGFR Antibody	Hu Ms	E WB ICC
Myeloma Cancer Stem Cell Markers			
22409	CD27L(CD27L(CD70)) Antibody	Hu	WB
Osteosarcoma Cancer Stem Cell Markers			
21476	ABCG2(CD338) Antibody	Hu Ms Rt	WB
29140	Nestin Antibody	Hu	WB IHC
29141	Nestin Antibody	Ms Rt	WB IHC

Cat. No.	Product name	Species Reactivity	Applications
Ovarian Cancer Stem Cell Markers			
27068	AMACR(C-term) Monoclonal Antibody	Hu Ms Rt	WB ICC
22981	CD44 antigen isoform 4 Antibody	Hu	WB IHC IF
21232	c-Kit(Ab-721) Antibody	Hu Ms Rt	WB
21539	c-kit(Ab-936) Antibody	Hu	WB IHC
Pancreatic Cancer Stem Cell Markers			
24394	BMI-1 Antibody	Hu Ms Rt	E WB ICC
22981	CD44 antigen isoform 4 Antibody	Hu	WB IHC IF
24002	CXCR4 Antibody	Hu Ms	E WB ICC IP IF FC
24003	CXCR4 Antibody	Hu Ms	E WB
24624	CXCR4-Lo Antibody	Hu	E WB ICC
27030	EPCAM Monoclonal Antibody	Hu Ms	WB
Prostate Cancer Stem Cell Markers			
21476	ABCG2(CD338) Antibody	Hu Ms Rt	WB
27068	AMACR(C-term) Monoclonal Antibody	Hu Ms Rt	WB ICC
24394	BMI-1 Antibody	Hu Ms Rt	E WB ICC
22981	CD44 antigen isoform 4 Antibody	Hu	WB IHC IF
21035	Myc(Ab-358) Antibody	Hu Ms Rt	WB IHC
21390	Myc Mouse Monoclnal Antibody	Hu Ms Rt	WB

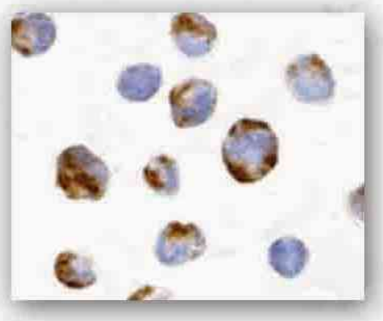
Western blot analysis of extract from HL-60 cells using ABCG2(CD338) Antibody **#21476**.



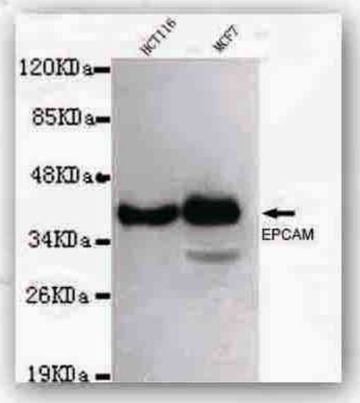
24002
Immunocytochemistry of CXCR4 in HeLa cells with CXCR4 antibody at 2 ug/mL.



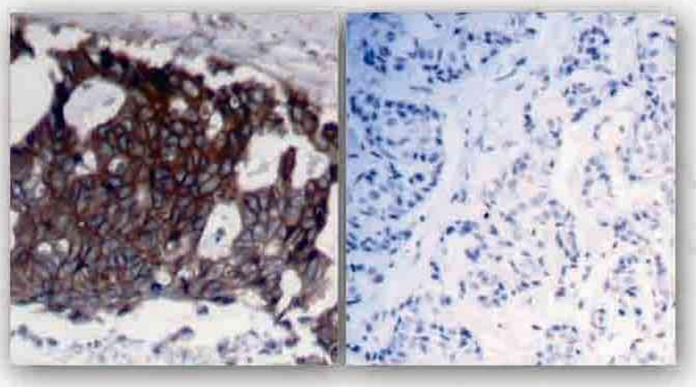
22981
Confocal immunofluorescence analysis (Olympus FV10i) of methanol-fixed HeLa, using CD44 antibody (Green) at 1: 500 dilution and alpha-tubulin antibody (Red) at 1: 2000.



24394
Immunocytochemistry of BMI-1 in K562 cells with BMI-1 antibody at 10 ug/mL.



27030
1:1000 dilution of this antibody detected EPCAM on 40ug of cell lysates.



21072
Immunohistochemical analysis of paraffin-embedded human breast carcinoma tissue using HER2(Ab-1248) Antibody #21072(left) or the same antibody preincubated with blocking peptide(right).

Cell Cycle

Cell cycle, or cell-division cycle, is the series of events that take place in a cell leading to its division and duplication (replication). Cell cycle control affects many aspects of development. Caenorhabditis elegans cell-cycle genes have been identified over the past decade, including at least two distinct Cyclin-Dependent Kinases (CDKs), their cyclin partners, positive and negative regulators, and downstream targets. The balance between CDK activation and inactivation determines whether cells proceed through G1 into S phase, and from G2 to M, through regulatory mechanisms that are conserved in more complex eukaryotes. Many different stimuli exert checkpoint control including TGF, DNA damage, contact inhibition, replicative senescence, and growth factor withdrawal. G1 phase CDKs and their inhibitors (CKIs) are central to the pathways that regulate commitment to cellular division in response to positive as well as negative growth effectors. Many checkpoints are deregulated in oncogenesis, and this is often due to alterations in cyclin-CDK complexes.CDK activity is modulated by cyclin binding, phosphorylation, and CKIs, including the INK4 proteins and the closely related inhibitors p21Cip1 and p27Kip1. The downstream targets of CDKs and their modulation by TGF-beta and other growth factors include proteins of the retinoblastoma family, and the related modulation of the transcriptional activity of the E2F family members.

A disregulation of the cell cycle components may lead to tumor formation. As mentioned above, some genes like the cell cycle inhibitors, RB, p53 etc., when they mutate, may cause the cell to multiply uncontrollably, forming a tumor. The cells which are actively undergoing cell cycle are targeted in cancer therapy.

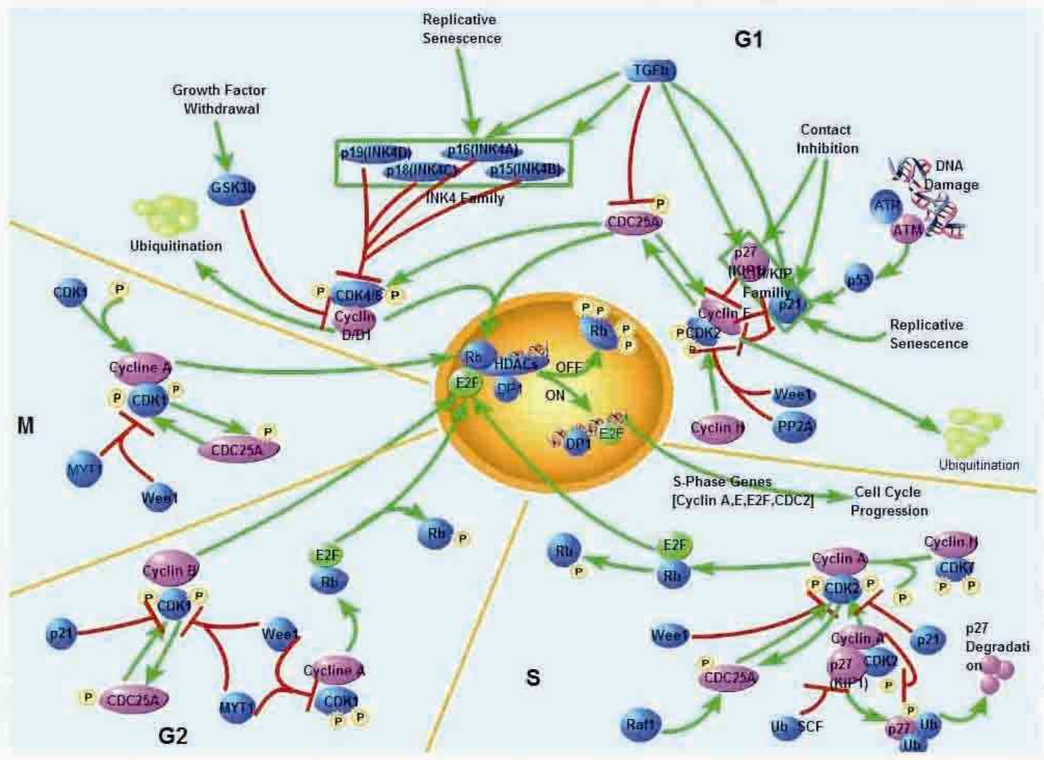
Selected Reviews:

1、Dyson, N. (1998) The regulation of E2F by pRB-family proteins. Genes Dev. 12, 2245-2262.

2、Elledge SJ. (1996) Cell cycle checkpoints: preventing an identity crisis. Science. 274(5293):1664-72.

3、Ravitz MJ, Wenner CE. （1997）Cyclin-dependent kinase regulation during G1 phase and cell cycle regulation by TGF-beta. Adv Cancer Res. 71:165-207.

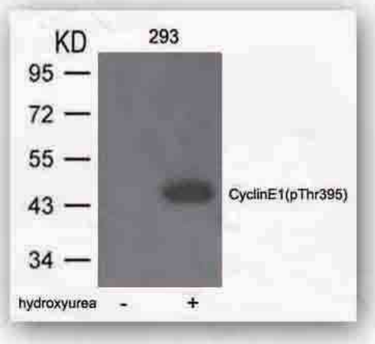
4、van den Heuvel S.(2005) Cell-cycle regulation. WormBook. 21:1-16.



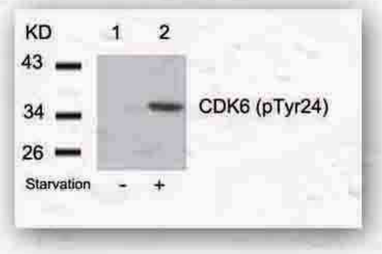
Cell Cycle

(Part of 338 cell cycle related Products)

Cat. No.	Product name	Species Reactivity	Applications
21188	14-3-3z(Ab-58) Antibody	Hu Ms Rt	WB IHC
11181	14-3-3z(Phospho-Ser58) Antibody	Hu Ms Rt	WB IHC IF
21147	ATM(Ab-1981) Antibody	Hu Ms	WB IF
11122	ATM(Phospho-Ser1981) Antibody	Hu	WB IHC
21505	ATR(Ab-428) Antibody	Hu	IHC
11519	Aurora A(phospho-Thr288) Antibody	Hu Ms	IHC
21059	BCL-2(Ab-56) Antibody	Hu	WB IHC IF
21060	BCL-2(Ab-70) Antibody	Hu	WB IHC IF
11066	BCL-XL(Phospho-Ser62) Antibody	Hu Ms Rt	WB IHC IF
21139	BRCA1(Ab-1524) Antibody	Hu	WB IF
11242	BRCA1(Phospho-Ser1423) Antibody	Hu	WB IHC
11117	BRCA1(Phospho-Ser1524) Antibody	Hu	IHC
11125	c-Abl(Phospho-Tyr412) Antibody	Hu Ms	IHC IF
21529	CDC2(Ab-19) Antibody	Hu Rt	IHC
11134	CDC2(Phospho-Thr161) Antibody	Hu Ms Rt	WB IHC
11244	CDC2(Phospho-Tyr15) Antibody	Hu Ms Rt	WB
21163	cdc25A(Ab-76) Antibody	Hu Ms Rt	WB
11138	cdc25A(Phospho-Ser76) Antibody	Hu Ms Rt	WB IHC

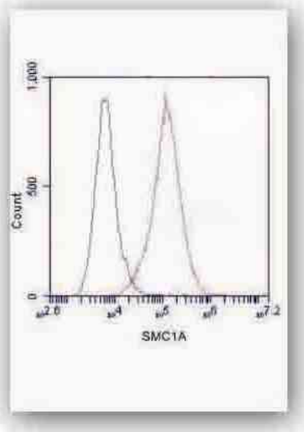


Western blot analysis of extracts from 293 cells untreated or treated with hydroxyurea using Cyclin E1(phospho-Thr395) Antibody **#11541**.



Western blot analysis of extracts from 293 cells untreated(lane 1) or treated with starvation(lane 2) using CDK6(phospho-Tyr24) Antibody **#11543**.

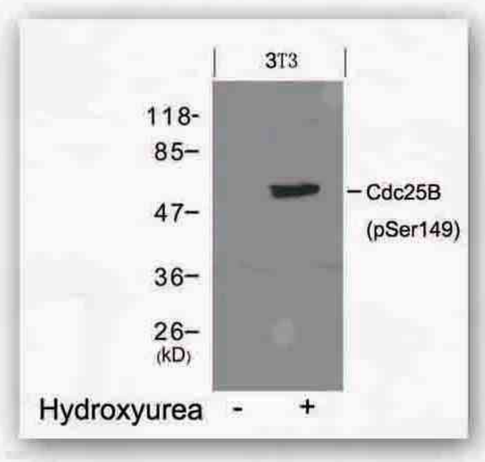
Cat. No.	Product name	Species Reactivity	Applications
11553	Cdc25B(Phospho-Ser149) Antibody	Ms Rt	WB
21145	cdc25C(Ab-216) Antibody	Hu	WB IHC IF
11118	cdc25C(Phospho-Ser216) Antibody	Hu	WB IHC IF
21111	CDK2(Ab-160) Antibody	Hu Ms Rt	WB
11133	CDK2(Phospho-Thr160) Antibody	Hu Ms Rt	WB IHC
21542	CDK6(Ab-13) Antibody	Hu Ms	IHC IF
21543	CDK6(Ab-24) Antibody	Hu Ms	WB IHC
11542	CDK6(phospho-Tyr13) Antibody	Hu Ms	WB IHC IF
11543	CDK6(phospho-Tyr24) Antibody	Hu Ms	WB IHC IF
21114	Chk1(Ab-317) Antibody	Hu Ms	WB IHC
11140	Chk1(Phospho-Ser280) Antibody	Hu	WB
11147	Chk2(Phospho-Ser516) Antibody	Hu	WB
21414	CRY1 Antibody	Ms	WB
21540	Cyclin B1(Ab-147) Antibody	Hu Ms	WB IHC IF
11540	Cyclin B1(phospho-Ser147) Antibody	Hu	WB IHC IF
21541	Cyclin E1 (Ab-395) Antibody		
21646	E2F-1 Antibody	Hu Ms	WB
21657	E2F-2 Antibody	Hu Ms	WB
11504	JNK1/JNK2/JNK3(phospho-Thr183/Tyr185) Antibody	Hu Ms Rt	WB IF
21550	MDM2(Ab-166) Antibody	Hu Ms Rt	WB IHC IF
11550	MDM2(phospho-Ser166) Antibody	Hu	WB IHC IF
21034	Myc(Ab-58) Antibody	Hu Ms Rt	WB IHC
11036	Myc(Phospho-Ser373) Antibody	Hu Ms Rt	WB IHC
11206	p21Cip1(Phospho-Thr145) Antibody	Hu	IHC
11208	p27Kip1(Phospho-Thr187) Antibody	Hu Ms Rt	WB IHC
21089	p53(Ab-37) Antibody	Hu Ms	WB
21090	p53(Ab-46) Antibody	Hu	WB
11094	p53(Phospho-Ser15) Antibody	Hu	WB IHC IF
11100	p53(Phospho-Ser315) Antibody	Hu	WB IHC IF
11097	p53(Phospho-Ser33) Antibody	Hu	WB IF
11098	p53(Phospho-Ser37) Antibody	Hu Ms Rt	WB IF
11099	p53(Phospho-Ser46) Antibody	Hu	WB IF
11092	p53(Phospho-Ser6) Antibody	Hu Ms	WB IHC
11095	p53(Phospho-Thr18) Antibody	Hu	WB
21109	Rb(Ab-807) Antibody	Hu Ms Rt	WB IHC
11132	Rb(Phospho-Ser780) Antibody	Hu Ms Rt	WB IHC IF
11130	Rb(Phospho-Ser795) Antibody	Hu Ms Rt	WB IHC IF
11131	Rb(Phospho-Ser807) Antibody	Hu Ms Rt	WB IHC
21190	SMC1(Ab-957) Antibody	Hu Ms	WB IHC
11198	SMC1(Phospho-Ser957) Antibody	Hu Ms	WB IHC



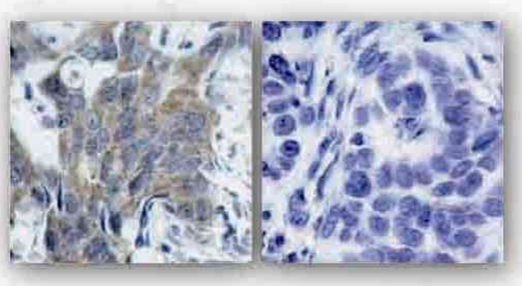
27022

Hela cells stained with SMC1A (red, 1:100 dilution), followed by FITC-conjugated goat anti-mouse IgG. Black line histogram represents the isotype control, normal mouse IgG.

Immunofluorescence staining of methanol-fixed Hela cells using ABL1/2(phospho-Tyr393/429) Antibody **#11530**.



Western blot analysis of extracts from 3T3 cells untreated(lane 1) or treated with Hydroxyurea(lane 2) using Cdc25B(Phospho-Ser149) Antibody **#11553**.



Immunohistochemical analysis of paraffin-embedded human breast carcinoma tissue using b-Catenin(Phospho-Ser33) Antibody **#11218**(left) or the same antibody preincubated with blocking peptide(right).

Oncoproteins/Suppressors

An oncogene is a gene that has the potential to cause cancer.[In tumor cells, they are often mutated or expressed at high levels. Most normal cells undergo a programmed form of death (apoptosis). Activated oncogenes can cause those cells that ought to die to survive and proliferate instead. Most oncogenes require an additional step, such as mutations in another gene, or environmental factors, such as viral infection, to cause cancer. Since the 1970s, dozens of oncogenes have been identified in human cancer. Many cancer drugs target the proteins encoded by oncogenes.

A proto-oncogene is a normal gene that can become an oncogene due to mutations or increased expression. The resultant protein may be termed an oncoprotein. Proto-oncogenes code for proteins that help to regulate cell growth and differentiation. Proto-oncogenes are often involved in signal transduction and execution of mitogenic signals, usually through their protein products.

Suppressor gene, or anti-oncogene, is a gene that protects a cell from one step on the path to cancer. When this gene is mutated to cause a loss or reduction in its function, the cell can progress to cancer, usually in combination with other genetic changes. Tumor-suppressor genes either have a dampening or repressive effect on the regulation of the cell cycle or promote apoptosis, and sometimes do both.

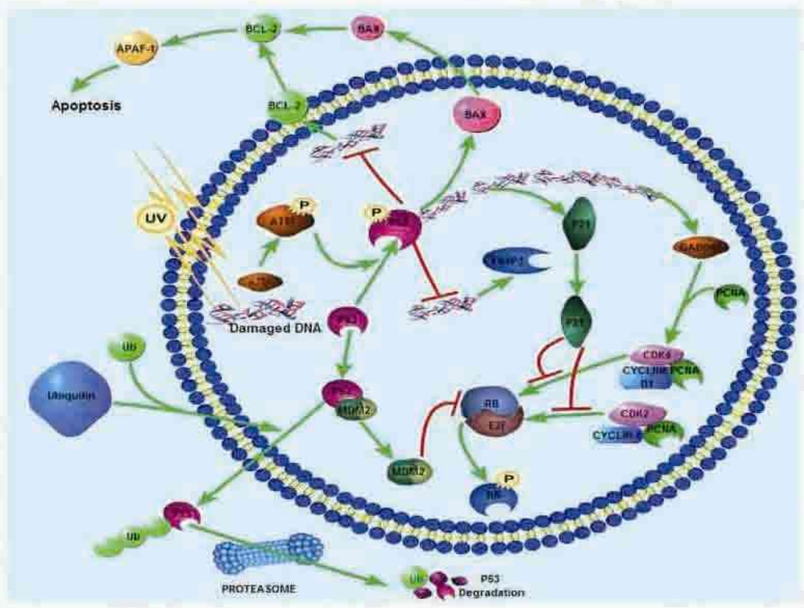
Selected Reviews:

1、Croce CM (2008) Oncogenes and cancer. N Engl J Med. 358 (5): 502-11

2、Yokota J (2000) Tumor progression and metastasis. Carcinogenesis. 21 (3): 497-503

3、May P (1999) Twenty years of p53 research: structural and functional aspects of the p53 protein. Oncogene. 18(53):7621-36

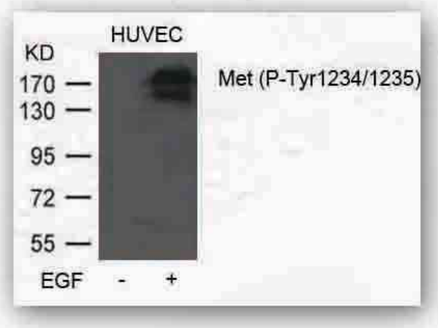
4、Melamud A (2006) Retinoblastoma. Am Fam Physician 73 (6): 1039-44



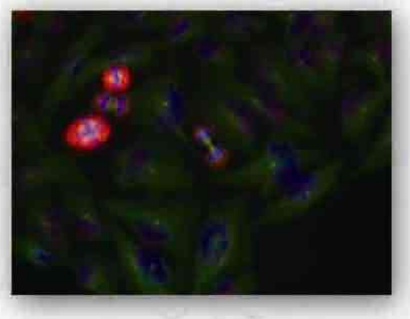
P53 and Rb Suppressors

(Part of 246 oncoproteins&suppressors related products)

Cat. No.	Product name	Species Reactivity	Applications
11054	Akt(Phospho-Ser473) Antibody	Hu Ms Rt	WB IHC
21147	ATM(Ab-1981) Antibody	Hu Ms	WB IF
11122	ATM(Phospho-Ser1981) Antibody	Hu	WB IHC
21505	ATR(Ab-428) Antibody	Hu	IHC
21582	Beclin-1 Antibody	Hu	WB
21280	BIM(Ab-69) Antibody	Hu Ms Rt	WB IHC
11288	BIM(Phospho-Ser69) Antibody	Hu Ms Rt	IHC IF
11242	BRCA1(Phospho-Ser1423) Antibody	Hu	WB IHC
11117	BRCA1(Phospho-Ser1524) Antibody	Hu	IHC
21662	Brg1 Antibody	Hu Ms Rt	WB
11125	c-Abl(Phospho-Tyr412) Antibody	Hu Ms	IHC IF
21549	c-Cbl(Ab-700) Antibody	Hu	WB IHC
11549	c-Cbl(phospho-Tyr700) Antibody	Hu	WB IHC IF
21667	C-Fos Antibody	Hu Ms Rt	WB
21022	c-Jun(Ab-93) Antibody	Hu Ms Rt	WB IHC
11023	c-Jun(Phospho-Tyr170) Antibody	Hu Ms Rt	WB
21232	c-Kit(Ab-721) Antibody	Hu Ms Rt	WB
11240	c-Kit(Phospho-Tyr721) Antibody	Hu Ms Rt	WB
21646	E2F-1 Antibody	Hu Ms	WB
21657	E2F-2 Antibody	Hu Ms	WB
21221	EGFR(Ab-1197) Antibody	Hu Ms Rt	WB
11551	EGFR(phospho-Tyr1197) Goat Polyclonal Antibody	Hu Ms Rt	WB

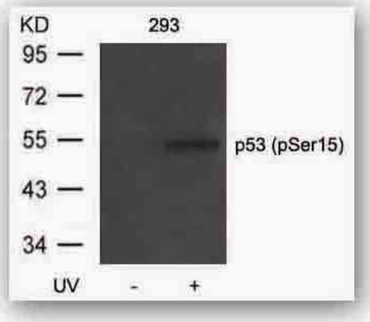


Western blot analysis of extracts from HUVEC cells untreated or treated with EGF using Met (Phospho-Tyr1234/1235) Antibody **#11585**.

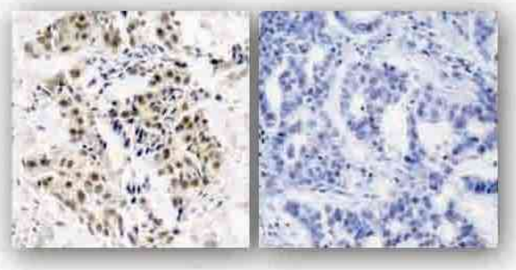


Immunofluorescence staining of methanol-fixed Hela cells using c-Jun(Phospho-Thr239) Antibody **#11024**.

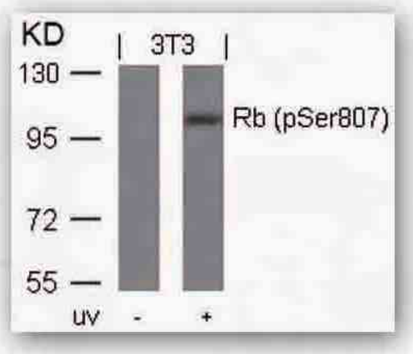
Cat. No.	Product name	Species Reactivity	Applications
21037	Elk1(Ab-389) Antibody	Hu Ms Rt	WB IHC IF
11037	Elk1(Phospho-Ser389) Antibody	Hu	WB IHC
21480	ERG Antibody	Hu Ms Rt	WB
21231	FGF Receptor 1(Ab-154) Antibody	Hu Ms Rt	WB
21637	FOXP1 Antibody	Hu Ms Rt	WB
21660	HDAC3 Antibody	Hu Ms Rt	WB
11149	JAK1(Phospho-Tyr1022) Antibody	Hu Ms Rt	WB IHC
21121	Jak2(Ab-1007) Antibody	Hu Ms Rt	WB
11151	Jak2(Phospho-Tyr1007) Antibody	Hu Ms Rt	WB IHC
11504	JNK1/JNK2/JNK3(phospho-Thr183/Tyr185) Antibody	Hu Ms Rt	WB IF
21550	MDM2(Ab-166) Antibody	Hu Ms Rt	WB IHC IF
11550	MDM2(phospho-Ser166) Antibody	Hu	WB IHC IF
21258	Merlin(Ab-518) Antibody	Hu Ms Rt	WB IHC
11266	Merlin(Phospho-Ser518) Antibody	Hu Ms Rt	WB IF
11585	Met (Phospho-Tyr1234/1235) Antibody	Hu Ms Rt	WB
21230	Met(Ab-1349) Antibody	Hu Ms Rt	WB
21035	Myc(Ab-358) Antibody	Hu Ms Rt	WB IHC
11035	Myc(Phospho-Thr358) Antibody	Hu Ms Rt	WB IHC IF
11206	p21Cip1(Phospho-Thr145) Antibody	Hu	IHC
21090	p53(Ab-46) Antibody	Hu	WB
11094	p53(Phospho-Ser15) Antibody	Hu	WB IHC IF
21075	p73(Ab-99) Antibody	Hu Ms Rt	WB
11058	p73(Phospho-Tyr99) Antibody	Hu	WB
21219	PDGF Receptor b(Ab-751) Antibody	Hu Ms Rt	WB
21508	PI3K P85 a/g/b(Ab-467/199/464) Antibody	Hu Ms Rt	IHC
11508	PI3K P85(phospho-Tyr467) Antibody	Hu Ms Rt	WB
21057	PTEN(Ab-370) Antibody	Hu Ms Rt	WB IHC
11056	PTEN(Phospho-Ser380/Thr382/Thr383) Antibody	Hu Ms Rt	WB IHC IF
21566	Raf1 Antibody	Rt	WB
11006	Raf1(Phospho-Ser259) Antibody	Hu Ms Rt	WB IHC
21109	Rb(Ab-807) Antibody	Hu Ms Rt	WB IHC
11132	Rb(Phospho-Ser780) Antibody	Hu Ms Rt	WB IHC IF
21020	Rel(Ab-503) Antibody	Hu	IF
11020	Rel(Phospho-Ser503) Antibody	Hu	IF
21241	SAPK/JNK(Ab-183) Antibody	Hu Ms Rt	WB IHC
11249	SAPK/JNK(Phospho-Thr183) Antibody	Hu Ms Rt	WB IHC
21318	SHP-1(Ab-536) Antibody	Hu Ms Rt	WB IHC IF
21168	Src(Ab-529) Antibody	Hu Ms Rt	WB IHC
11153	Src(Phospho-Tyr529) Antibody	Hu Ms Rt	WB IHC IF
21326	TrkA(Ab-791) Antibody	Hu	IF
11326	TrkA(Phospho-Ser791) Antibody	Hu	WB IF
11327	TrkB(Phospho-Tyr515) Antibody	Hu Ms Rt	IF
11328	TrkB(Phospho-Tyr705) Antibody	Hu Ms Rt	WB
21668	WISP2 Antibody	Hu	WB



Western blot analysis of extracts from 293 cells untreated or treated with UV using p53(Phospho-Ser15) Antibody **#11094**.



Immunohistochemical analysis of paraffin-embedded human breast carcinoma tissue using ATM(Phospho-Ser1981) Antibody **#11122**(left) or the same antibody preincubated with blocking peptide(right).



Western blot analysis of extracts from 3T3 cells untreated or treated with UV using Rb(Phospho-Ser807) Antibody **#11131**.

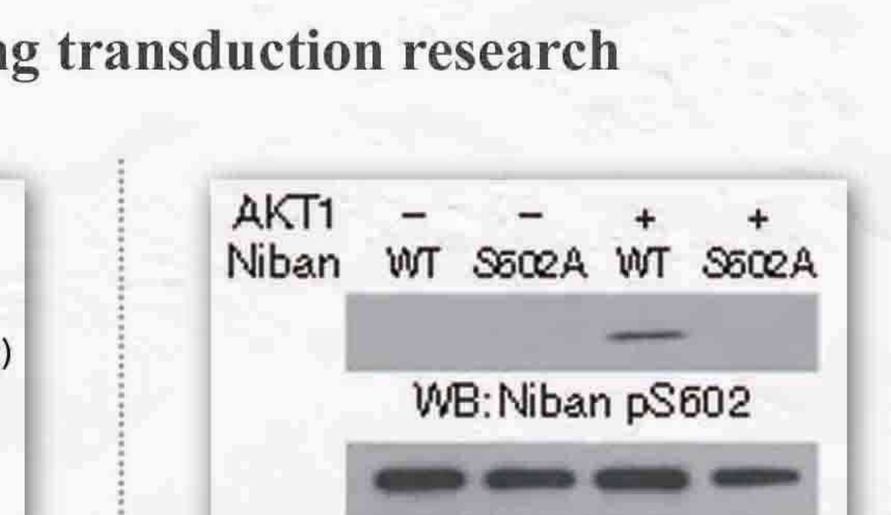
24909

Immunocytochemistry of Fibulin 3 in HeLa cells with Fibulin 3 antibody at 20 ug/mL.

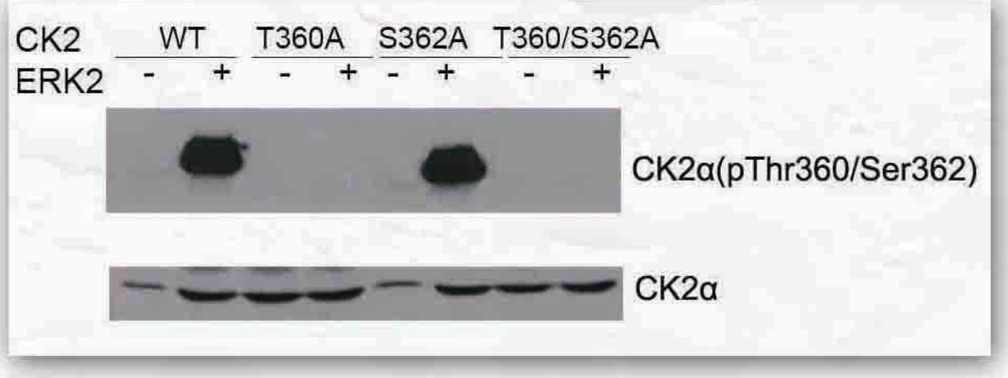
Cancer Related Pathway

- ◆Akt Pathway
- ◆Apoptosis Pathway
- ◆Cell Cycle Regulation
- ◆Channel Pathway
- ◆Chromatin/Transcription Regulation
- ◆Cytoskeleton/Adhesion
- ◆DNA Damage/Repair
- ◆Immune System Regulation
- ◆Insulin/Glucose Metabolism
- ◆Jak/Stat Pathway
- ◆Kinases/Phosphatases
- ◆MAPK Pathway
- ◆NF-kappa B Pathway
- ◆RTKs/Adaptors
- ◆Stem Cell Regulation
- ◆TGFb/smads Pathway
- ◆Translation Regulation
- ◆Wnt/Notch/Hedgehog Pathway

NF-kappa B Pathway

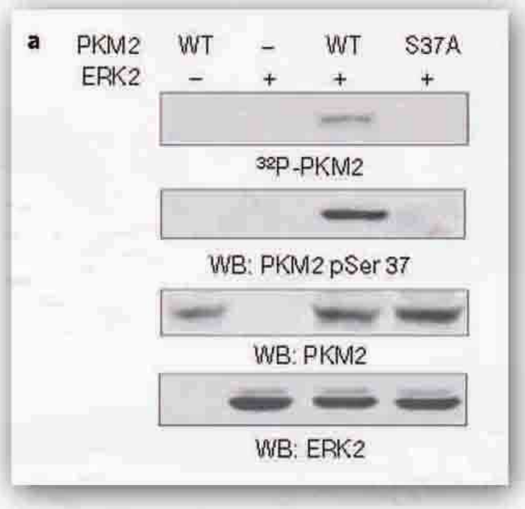


Part of new products for Cell signaling transduction research

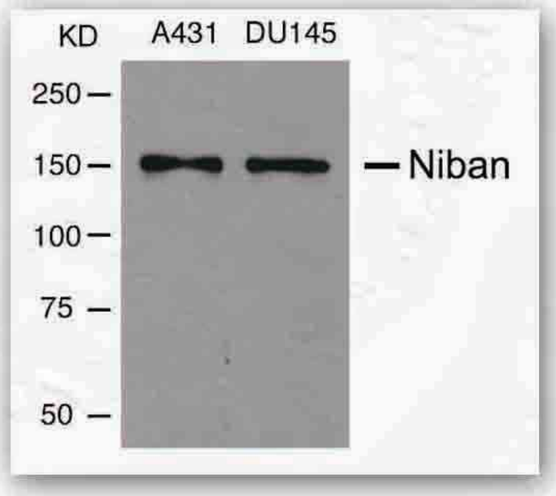


Western blot of CK2a(Phospho- Thr360/Ser362) antibody**(#11572)** and CK2a antibody**(#21572)** in vitro kinase assay. Both purified ERK2 and CK2 were used. K2a (Phospho-Thr360/ Ser362) antibody could recognize ERK2 phosphorylated wild type CK2a and CK2a when Ser362 was mutated to alanine .

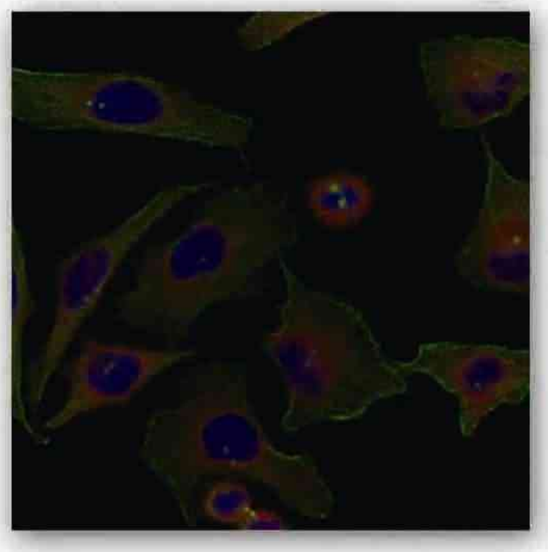
Western blot analysis in vitro kinase assays were performed by mixing purified bacterially expressed WT His–Niban or the His–Niban S602A with or without purified active AKT1 using Niban (Phospho-Ser602) Antibody **#11578**.



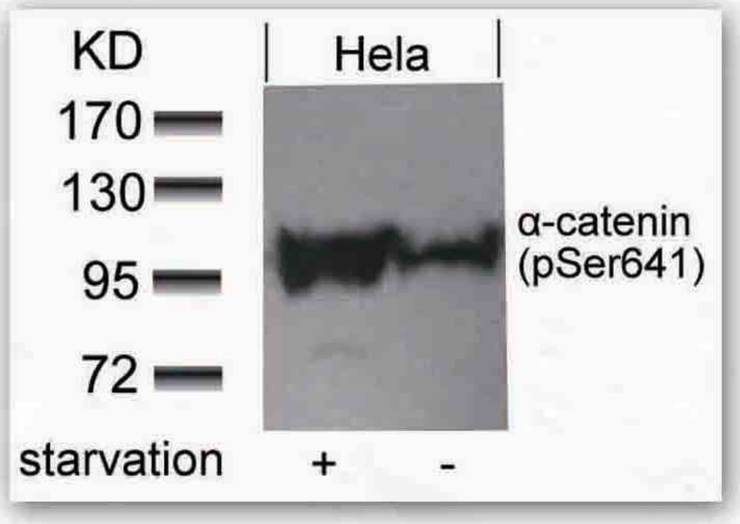
Western blot analysis of in vitro kinase assays carried out with puried active ERK2, wild-type (WT) PKM2 and PKM2 S37A mutant using PKM2(phospho-Ser37)Antibody **#11456**.



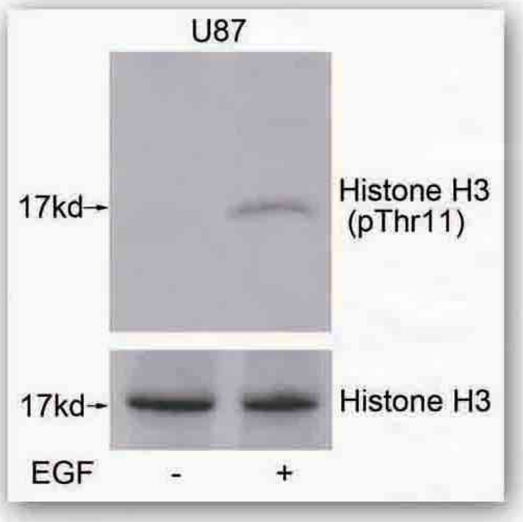
Western blot analysis of extracts from A431 and DU145 cells using Niban Antibody **#21401**.



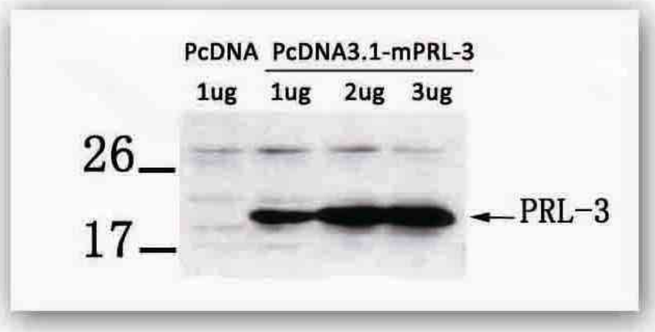
Immunofluorescence staining of methanol-fixed Hela cells using Niban Antibody **#21401**.



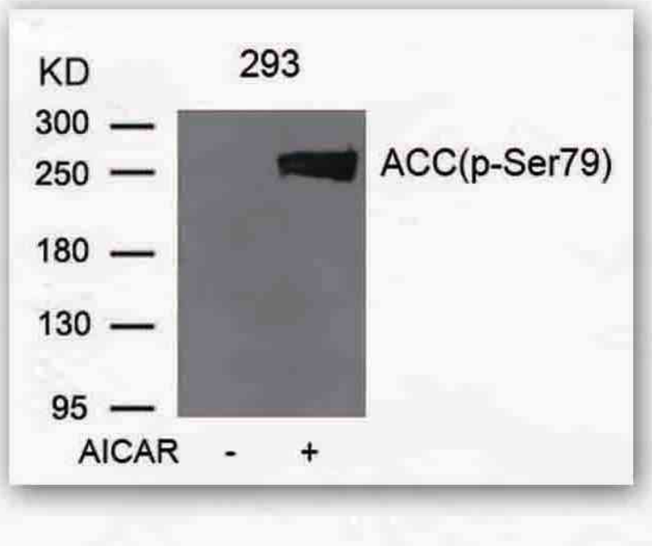
Western blot analysis of extracts from Hela cells untreated or treated with starvation using a-catenin(Phospho-Ser641) antibody **#11330**.



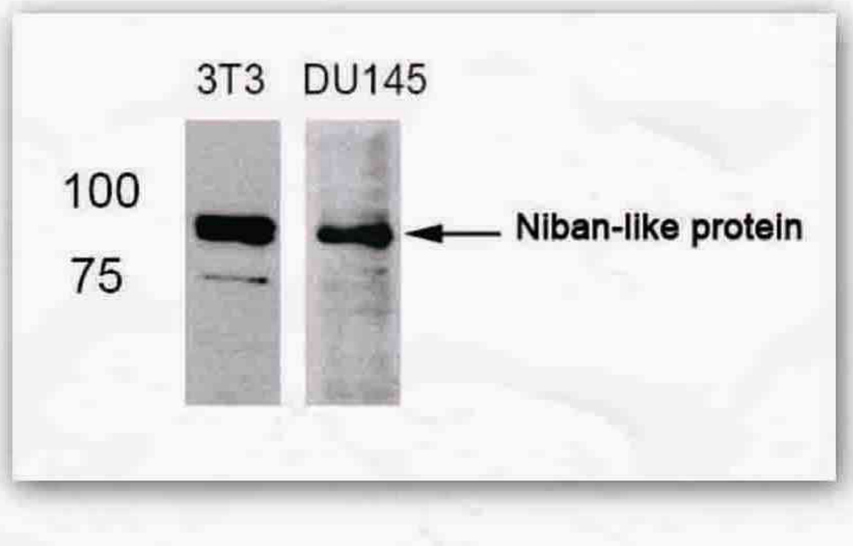
Western blot analysis of extracts from U87 cells untreated or treated with EGF using Histone H3(Phospho-Thr11) Antibody **#11577**.



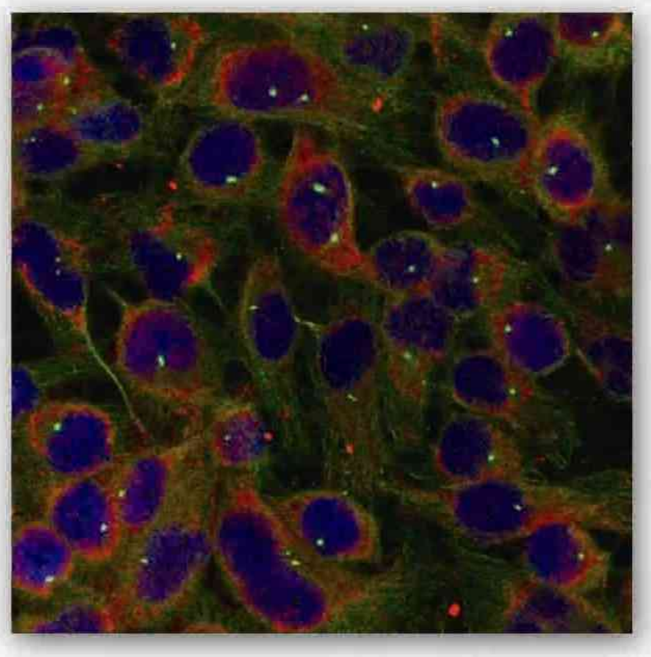
Western blot analysis of extract from LX-2 cells transfected with PRL-3 using PRL-3 antibody **#21333**.



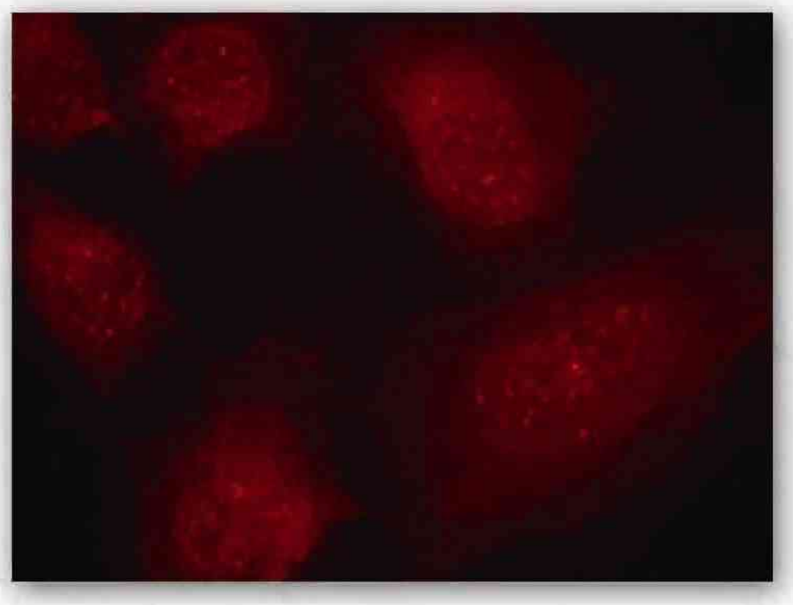
Western blot analysis of extracts from 293 cells untreated or treated with AICAR using Acetyl-CoA Carboxylase (Phospho-Ser79) Antibody **#11584**.



Western blot analysis of extracts from 3T3 and DU145 cells using Niban-like protein(Ab-712) antibody **#21332**.



Immunofluorescence staining of methanol-fixed Hela cells using Niban-like protein(Ab-712) antibody **#21332**.



Immunofluorescence staining of methanol-fixed HeLa cells using CARM1(Ab-228) antibody(**#21331**, Red).

Antibody Tools For Life Science Research

SAB Profile

USA Headquarter

Signalway Antibody LLC (SAB) is located in College Park, Maryland, USA. SAB is a professional manufacturer of phospho-specific antibody products, committed to provide high-quality antibody research tools for the global life science researchers. Currently, SAB researches and develops more than 4000 kinds of antibody products, covering cell signal transduction, cancer, stem cell, immunology, neuroscience, apoptosis, infectious diseases and other areas.

SAB establishes the QA and QC management system that meets the highest international standards and integrity. To strictly control the production, testing and logistics procedures, through continuous verification, SAB ensures that the product quality of every batch can keep specificity, stability and continuity from our production workshop to the hands of users .SAB has a professional technical service team, to provide technical support within 24 hours and experimental solutions within 1 week.

SAB cooperates with life science companies, hospitals and institutions in the world. To serve you is our commitment. Please contact us if SAB can assist you to encourage your research.

Asian Center

Nanjing Chuanbo Biotech Co., Ltd. is located in 10 Xinghuo Road, Building A, Suite 405, Nanjing Hi-Tech Zone, Nanjing, Jiangsu, China,with over 600 square meters of R & D center, and the a more than 400 square meters of animal experiments center. The products are mainly used in the bio-pharmaceutical research work, including antibodies used in research, cytokines, recombinant proteins, peptides, and other biological agents, as well as enzymes kit, the ELASA kit, dye and other chemical and biological agents.

SAB 's Belief

High Quality

With complete Quality Assurance and Control System, our scientist could monitor the processes of production ,detection ,delivery and so on. In order to ensure the specificity, stability and continuity , our QC department verifies the batches continually through many detection methods ,such as Western Blot (WB), Immunohistochemistry (IHC), Immunofluorescence (IF) and so on.

Competitive Price

By comparing with similar products, the price of SAB antibodies is very competitive in the international market. International customers could enjoy this favorite price from our distributors worldwide.

Quick Delivery

For the purpose of shortening the shipment time, three inventory centers, America, Europe and Asia sales center, have been set up to make sure the customers can get the orders within 3 days, and in the meanwhile, it is convenient for us to contact and cooperate with distributors, institutes and companies all over the word. Till now. Our products have been sold in more than 40 countries through our international distributors.

Rapid Technical Support

Professional technical service department and staff, who are responsible for the technical consults, inquiries and resolve problems for customers. They reply to customers within 24 hrs and provide the verification of the tests according to the customers' requests in a week.

Custom Service

SAB also provide custom antibody service. Every project is of the utmost importance to us and we will therefore always partner with you to deliver best and satisfactory solutions.

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