



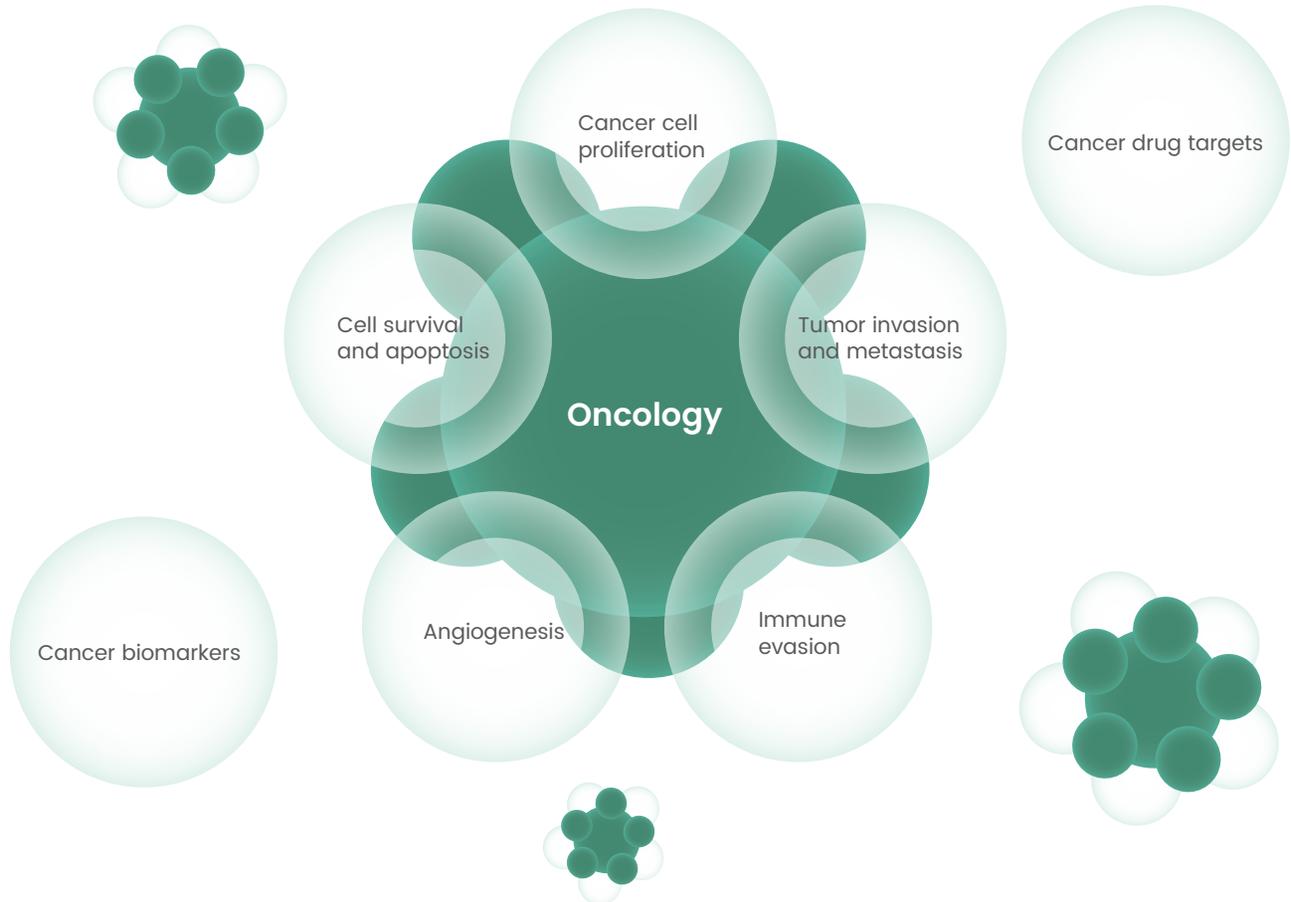
Reagents for Oncology Research



Reagents for Oncology Research

Cancer research is crucial to improving the prevention, detection, and treatment of cancers and ensuring a better life quality for cancer survivors. Specific research topics have been developed focusing on different hallmarks of cancer, including replicative immortality, invasion and metastasis, angiogenesis, reprogrammed energy metabolism, and immune evasion.

Sino Biological has developed high-quality bioreagents, including proteins, antibodies, genes, and ELISA kits to support your cancer research.



Sino Biological Products:



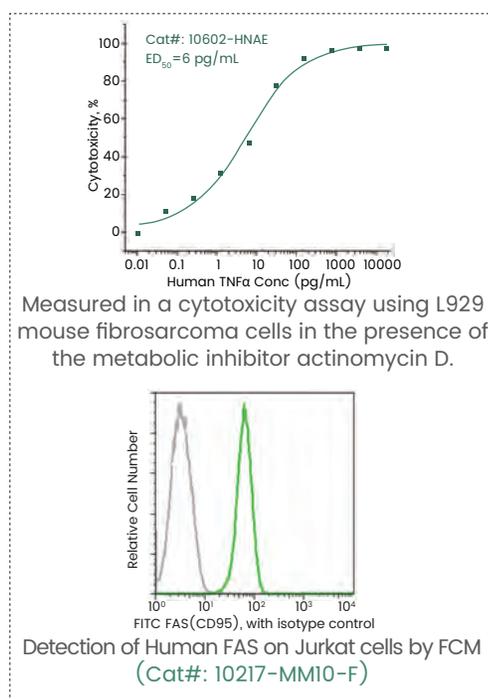
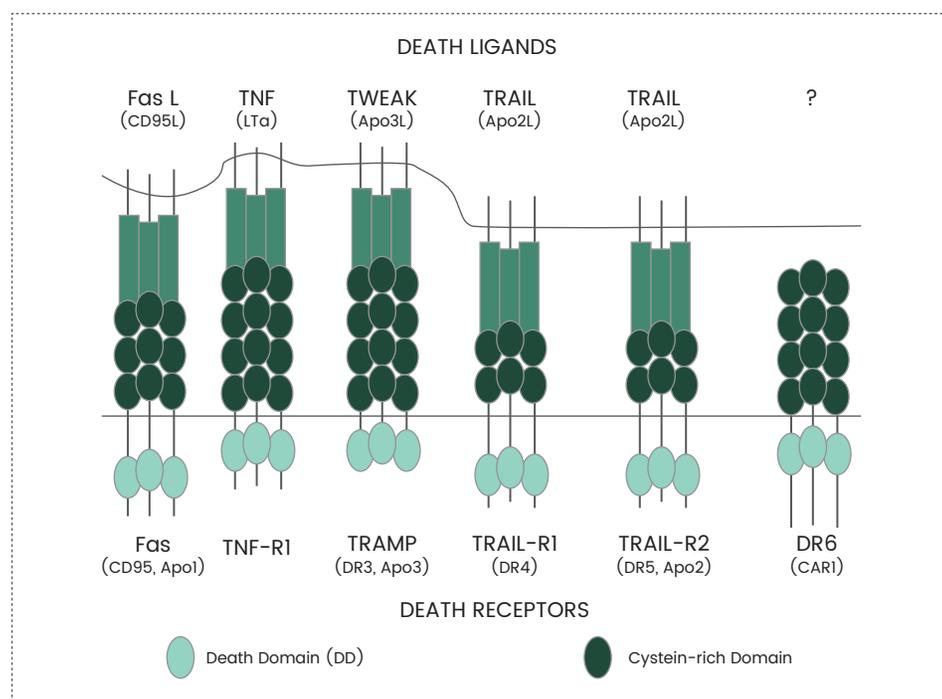
Supporting 5,000+ Customers Worldwide



Cell Survival and Apoptosis

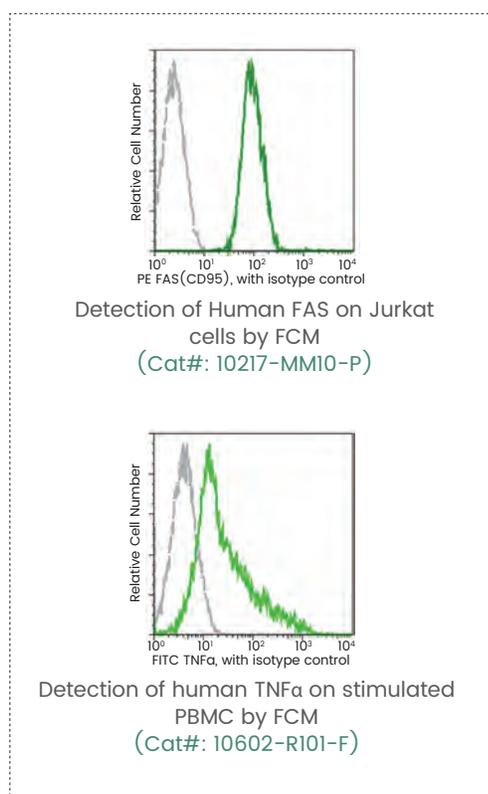
Escaping from cell death is one of the essential adaptations that enable cancer cells to survive cancer therapies. Death receptors including Fas, TNF α R, DR3, DR4, and DR5 and their ligands play vital roles in regulating programmed cell death, such as apoptosis and autophagy. In contrast, the aberrant expression of survival proteins (Bcl-2, inhibitor of apoptosis (IAP), and heat shock protein (HSP) families) is associated with a range of biological activities that promote cancer cell survival, proliferation, and resistance to therapy. Studies on these molecules are important for revealing the biology of cancer cell survival. Sino Biological has developed high-quality proteins, antibodies, and ELISA kits to support cell survival and apoptosis research.

Death Receptors and Ligands



Products for Death Receptors and Ligands

Molecule	Protein	Antibody	ELISA Kit
EDAR	H, R, Cy	H (WB, ELISA, IHC-P), Cy (ELISA)	
Fas/CD95	H, M, R, Cy	H (ELISA, FCM), M (ELISA, FCM, IF), R (ELISA, FCM)	H
Fas Ligand	H, M, R	H (WB, ELISA, IP), M (ELISA, IHC-P, IF), R (WB, IF)	
TNF-alpha	H, M, R, Ca, Cy, Fr	H (WB, ELISA, IP, FCM, Neutralization), M (ELISA, Neutralization), R (WB, ELISA, IF), Cy (ELISA), Fr (ELISA), Ca (ELISA)	H, M, Fr
DR4/TRAIL R1	H	H (ELISA, FCM)	H
DR5/TRAIL R2	H, M	H (ELISA, FCM), M (ELISA)	
DcR2/TRAIL R4	H, Rh	H (WB, ELISA, IHC-P, IP), Rh (ELISA, IHC-P)	H
Osteoprotegerin	H, M, Rh	H (ELISA, IF)	
TNFR2/TNFRSF1B	H, M, Cy	H (ELISA, Neutralization), M (WB, ELISA, IP, FCM, Neutralization), Cy (ELISA), R (WB, ELISA)	M
DR6	H, M, R, Cy	H (WB, ELISA), M (ELISA)	
DR3	H		
DcR3	H	H (IHC-P, IF)	
TRAIL/TNFSF10	H, M, Rh	H (ELISA, IHC-P, IF), M (WB, ELISA)	H
TLIA	H, R		
TNFRSF1A	H, M, R	H (WB, ELISA, IHC-P, IF, Neutralization), M (ELISA), R (WB, ELISA)	H, M



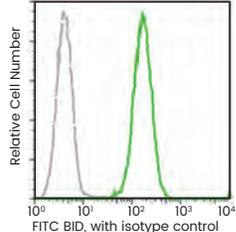
Cell Survival and Apoptosis

Other Molecules Involved in Apoptosis

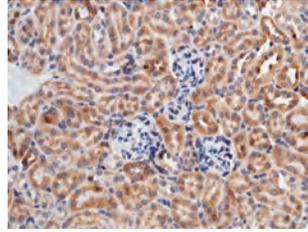
Sino Biological has proteins, antibodies, ELISA kits and gene products to support the research on apoptosis.

○ Products for Bcl2 Family

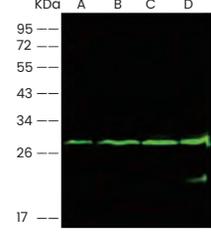
- Bcl-2 Bcl-XL Bim BNIP3L BCL2L12 Bcl2A1 BLK Bcl-W BID BMF



Detection of human Bid in Jurkat cells by FCM
(Cat#: 10468-MM10-F)



Detection of mouse BCL-xL in mouse kidney by IHC
(Cat#: 50012-RP02)



Detection of human Bcl2 by WB
(Cat#: 10195-MM09)

○ Products for Caspase Family

- Caspase-1/CASP1 Caspase-10 CASP12 Caspase-14 CASP2 Caspase-3
Caspase-4 Caspase-5 Caspase-6 Caspase-7 CASP8/ALPS2B Caspase-9

○ Products for Inhibitor of Apoptosis (IAPs)

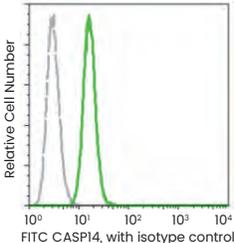
BIRC2	cIAP2/BIRC3	BIRC5	XIAP
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○ Products for Other Molecules Involved in Apoptosis

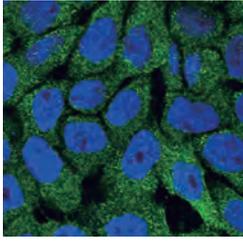
ORP150	HSPA1A	HSC70	HSP90AB1
ELK1	MAD2L1	STAT4	MAX
GranzymeA/GZMA	HtrA2/Omi	STAT6	SMAC
Granzyme B	IκB alpha	p53	STAT1
Granzyme H	NF-κB p65		

○ Products for Kinases in Apoptosis

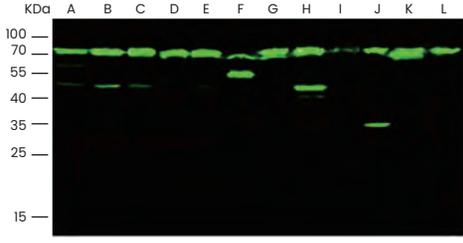
AKT2	P38 Gamma/MAPK12	p38
AKT3	P38 Gamma/MAPK12	MAPKAPK3
MAP4K2	P38 Delta/MAPK13	PRAK/MAPKAPK5



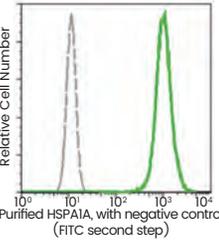
Detection of human Caspase 14 in HeLa cells by FCM
(Cat#: 11856-R006-F)



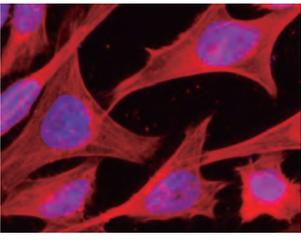
Detection of human Caspase 14 in A431 cells by IF
(Cat#: 11856-MM05)



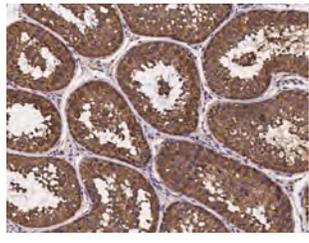
Detection of human HSP70/HSPA1A by WB
(Cat#: 11660-R001)



Detection of human HSP70/HSPA1A in HeLa cells by FCM & IF & IP
(Cat#: 11660-R001)



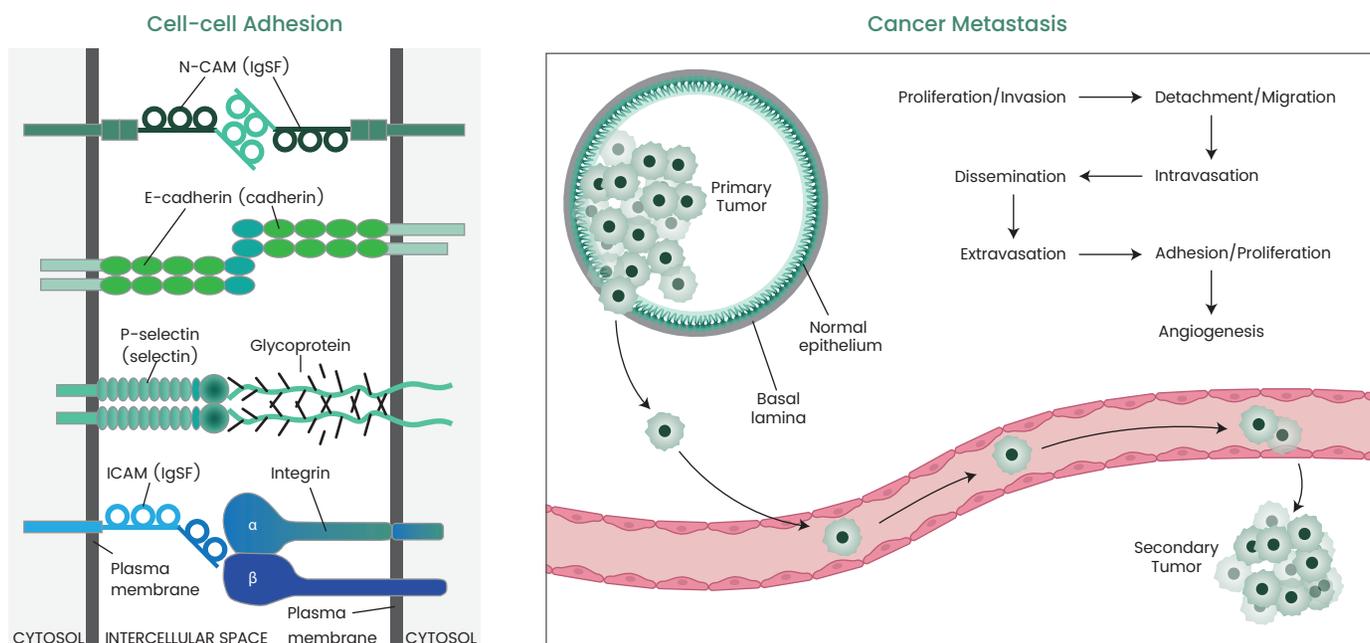
Detection of HSP70/HSPA1A in human hepatoma by IHC
(Cat#: 11660-R001)



Detection of HSP70/HSPA1A in cynomolgus macaque testis by IHC
(Cat#: 11660-R001)

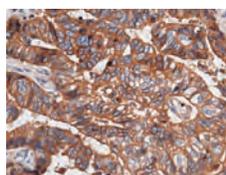
Tumor Invasion and Metastasis

Tumor invasion and metastasis are essential properties of cancer cells. Coordinated communication among stromal cells in the tumor microenvironment and individual tumor cells are required to promote tumor invasion and metastasis. Different adhesion systems in the extracellular matrix (ECM), proteases, chemokines, cytokines, and growth factors are involved in these processes. Sino Biological has developed a panel of bioreagents to support the study of tumor invasion and metastasis.

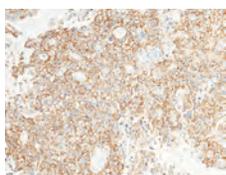


Adhesion Molecule Related Products (Partial)

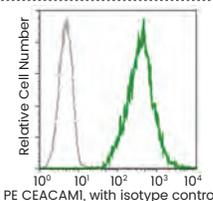
Molecule	Protein	Antibody	ELISA Kit
ASAM	H, M, R	H (ELISA, FCM), M (WB, ELISA)	
CD166/ALCAM	H, M, R, Cy	H (WB, ELISA, IHC-P, IF, FCM), M (ELISA, IHC-P, FCM), R (WB, ELISA, IHC-P, IP), Cy (WB, ELISA, IP, FCM)	
BCAM	H, M, R	H (WB, ELISA, IHC-P, IP), R (ELISA, IHC-P)	H
CD2	H, M, R, Cy, Ca	H (WB, ELISA, IHC-P, FCM), M (WB, ELISA, IHC-P)	
CD44	H, M	H (WB, ELISA, IHC-P, IF, FCM, IP), M (IHC-P)	H
CD48	H, M, R	H (WB, ELISA, IHC-P, FCM, IP), M (ELISA, FCM, IF), R (WB, ELISA, IHC-P, FCM, IP)	H, M
CEACAM1	H, M, R	H (WB, ELISA, IHC-P, IF, FCM), M (ELISA, IHC-P, IHC-Fr, IF, FCM), R (ELISA, IHC-P, FCM)	H
CEACAM5	H, Cy	H (ELISA, IHC-P, FCM)	H
CEACAM6	H, Cy	H (WB, ELISA, FCM, IHC-P, IF)	H
CHL1	H, M	H (ELISA), M (ELISA)	H
E-Cadherin	H, M, R	H (WB, ELISA, IHC-P, IF, FCM, IP), M (WB, ELISA, IHC-P, IP), R (WB, ELISA, IF)	H
ICAM-1	H, M, R, Rh	H (WB, ELISA, FCM, IHC-P, IF, IP), M (ELISA, IHC-P, IF, FCM), R (WB, ELISA, FCM, IHC-P, IF, IP)	H, M, R
JAM-A/Junctional Adhesion Molecule A	H, M, R	H (WB, ELISA, IHC-P, IF, FCM, IP)	H
LICAM	H	H (ELISA, IHC-P, FCM, IF), M (IHC-P)	H
CD146/MCAM	H, M	H (WB, ELISA, IHC-P, FCM, IF), M (WB, ELISA, IHC-P, FCM)	H
PVR1/NECTIN1	H, R	H (WB, ELISA, FCM), R (ELISA)	H, R
Nectin-2	H, M, R, Cy	H (WB, ELISA, FCM, IP), M (WB, ELISA, IP), R (ELISA, IHC-P)	H
CD31	H, M	H (WB, ELISA, FCM, IHC-P, IF, IP), M (ELISA, FCM, IHC-P)	H
VCAM1	H, M	H (WB, ELISA, IHC-P, IF, FCM, IP), M (WB, ELISA, FCM)	H
VE-Cadherin	M, H, R	H (WB, ELISA, FCM, IHC-P, IF), M (WB, ELISA, IHC-P, FCM), R (WB, ELISA)	H



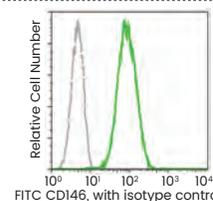
Detection of E-cadherin in human gastric cancer by IHC (Cat#: 10204-R032)



Detection of CD44 in human bladder cancer by IHC (Cat#: 12211-MM01)



Detection of human CEACAM1 on HT29 cells by FCM (Cat#: 10822-R103-P)

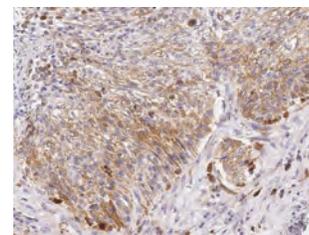


Detection of human CD146 on HeLa cells by FCM (Cat#: 10115-R044-F)

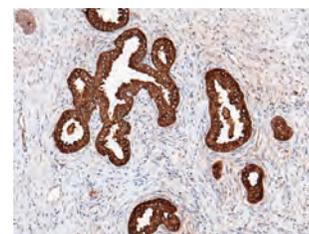
Tumor Invasion and Metastasis

ECM Proteases Related Products (Partial)

Molecule	Protein	Antibody	ELISA Kit
Cathepsin A	H, M	H (ELISA, IHC-P, IF), M (WB, ELISA, IP)	
Cathepsin B	H, M, R	H (WB, ELISA, IHC-P, IP), M (ELISA, IHC-P)	H
Cathepsin D	H, M	H (WB, ELISA, IHC-P, IF, IP), M (WB, ELISA, IP)	
Cathepsin E	M, R	M (ELISA, IHC-P), R (ELISA)	
Cathepsin G/CTSG		H (IHC-P)	
Cathepsin K		H (WB)	
Cathepsin L	H, M	H (WB, ELISA), M (ELISA, IHC-P)	
Cathepsin S	H, M, R	H (ELISA, IHC-P), M (WB, ELISA)	
Cathepsin V	H	H (WB, ELISA)	
Cathepsin Z/CTSZ	H, M	H (ELISA, IHC-P, IF), M (ELISA, IF)	
Cystatin A	H	H (WB, ELISA, IHC-P)	
Cystatin B	H	H (WB, ELISA, IHC-P, IP)	
Cystatin SN	H	H (ELISA)	H
Cystatin SA	H	H (ELISA)	H
cystatin C	H, M, R	H (WB, ELISA, IHC-P, IF, IP), M (WB, ELISA, IP), R (ELISA, IHC-P)	H
Cystatin S	H	H (ELISA, FCM, IF)	H
Cystatin D	H	H (ELISA)	
Cystatin M	H, M	H (ELISA, IHC-P), M (ELISA, IHC-P)	H
Cystatin F/CST7	H, M	H (WB, ELISA), M (ELISA)	H
Kallikrein 1	H, M	H (WB, ELISA), M (ELISA, IHC-P)	
Prostate Specific Antigen/KLK3	H	H (ELISA, IHC-P)	H
KLK4	H	H (ELISA, IHC-P)	
Kallikrein 6	H	M (WB, ELISA)	
Kallikrein 7/CLK7	H, M	H (ELISA, IHC-P), M (ELISA, IHC-P)	
Kallikrein 8	H	H (WB, ELISA)	
Kallikrein 11	H, M	H (WB, ELISA, IP)	H
Kallikrein 13	H	H (ELISA)	H



Detection of human Cathepsin D in human lung cancer by IHC (Cat#: 12517-R010)

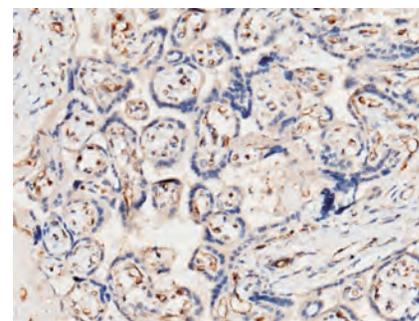


Detection of human KLK3 in human prostate by IHC (Cat#: 10771-MM03)

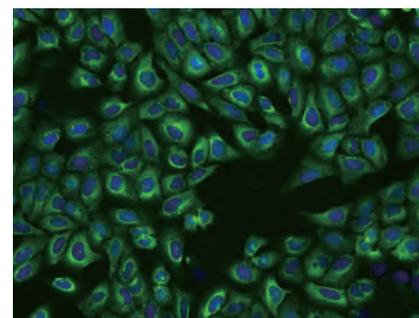
Other Tumor Invasion and Metastasis Related Molecules (Partial)

Sino Biological has developed proteins, antibodies, and gene products for a panel of tumor invasion and metastasis related molecules.

Collagens	COL9A1	COL6A3	COL5A2	COL4A3	Collagen II/COL2A1		
	COL5A1		COL5A3		Collagen VIII alpha 1		
ECM Regulators	Cathepsin B		LOXL2				
	P4HA2		PLOD3				
Other ECM Glycoproteins	Vitronectin	SPARC	Fibronectin	Periostin	TNN	TNC	LAMC2
	Fibrinogen gamma chain/FGG Proteins			Thrombospondin-1/TSP1	ELN		
Metastasis Initiation	LOX	VEGF	CSF-1	IDI	TWIST1		
	MET	FGFR	MMP-9		NEDD9		
Metastasis Progression	EREG	COX-2	MMP-1				
	CCL5		ANGPTL4				
Metastasis Virulence	CXCR4		CTGF				
	IL11		Endothelin-1				



Detection of human SPARC in human placenta by IHC (Cat#: 10929-RP02)



Immunofluorescence staining of P4HA2 in U2OS cells (Cat#: 200873-T46)

Tumor Immune Evasion

Immune evasion is a hallmark of cancer. This is due to both host- and tumor-related mechanisms that lead to a failure of the proper anti-tumor immune response. The key factors involved in this process include T cell anergy, the existence of regulatory T cells, systemic defects of dendritic cells, secretion of immunosuppressive cytokines, and deficient expression of immunomodulatory molecules and major histocompatibility complex (MHC) class I antigens. A number of therapies targeting these mechanisms have been designed to counter tumor progression with much success. Sino Biological has developed a panel of bioreagents to support the study of cancer immunotherapy.

Immune Checkpoint Related Reagents

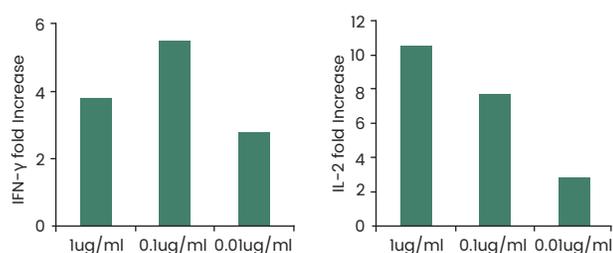


Protein Molecules (Partial)

PDCD1	PD-L1	PD-L2	TIGIT	CD155/PVR	PVRIG	PVRL1/NECTIN1
Nectin-2	Nectin 3	NECTIN4/Nectin 4	CD96	CD226	CD137	4-1BBL/TNFSF9
CTLA-4	CD28	B7-1	CD86	CEACAM1	CEACAM3	CEACAM5
CEACAM6	CD66b	LAG3	CD47	SIRP alpha	SIRP gamma/SIRPG	CD40 Ligand
CD40	OX40	OX40L/TNFSF4	B7-H3	B7-H3(4ig)	B7-H4	VISTA
B7-H6	HHLA2	NKp44/NCR2	NKp30/NCR3	TMIGD2	LILRA1/LIR-6/CD85i	LILRA2
LILRA3	LILRA4/CD85g	LILRA5	LILRA6	LILRB1	ILT4	LILRB3
ILT3	LILRB5/CD85c	TIM-3	CD30/TNFRSF8	CD30L	ICOS	ICOS ligand
CD70	CD27	TNFSF18	GITR	LIGHT	CD160	BTLA
HVEM	SLAM/CD150	CD48	CD229	2B4/CD244	CD84	SLAMF6
SLAMF7/CD319	LAIR1	LAIR2	SIGLEC5	CD22	CD33	SIGLEC6
SIGLEC10	SIGLEC15	BTN3A1	BTN3A3	HMGB1	RAGE	NKG2A
NKG2D	KIR2DL1	KIR2DL3	KIR2DL4	KIR2DL5	KIR3DL3	MICA
MICB	DR3					

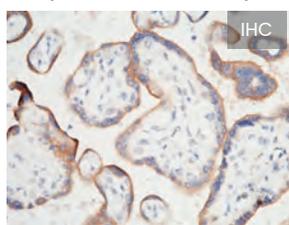
Immune Checkpoint Antibodies for Various Applications

Neutralizing Antibodies



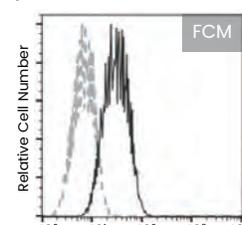
Effect of Human PD1 antibody (Cat#: 10377-HN94) on IFN-gamma and IL2 production in the Mixed Lymphocyte Reaction (MLR).

Anti-Human PD-L1
(Cat#: 10084-R015)



Detection of Human PD-L1 in Human placenta.

Anti-Human PD-L1
(Cat#: 10084-MM36-F)

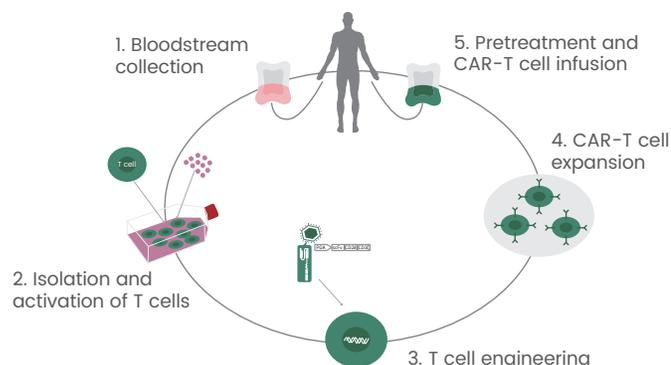


Detection of Human PD-L1 on HCC827 cells.

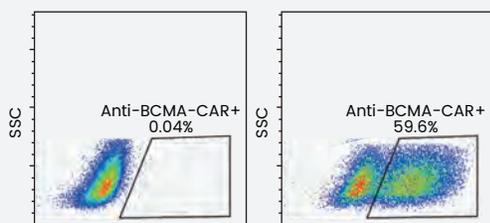
Tumor Immune Evasion

CAR-T Cell Therapy Related Reagents

Chimeric Antigen Receptor T cell therapy, or CAR-T cell therapy, has been widely used in the field of cancer immunotherapy and clinical application.

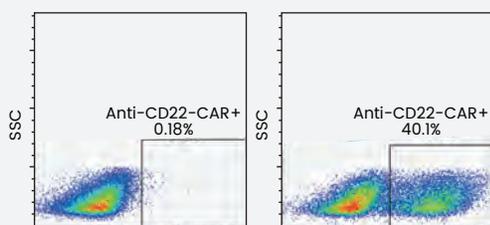


Bioactivity Validated by FACS



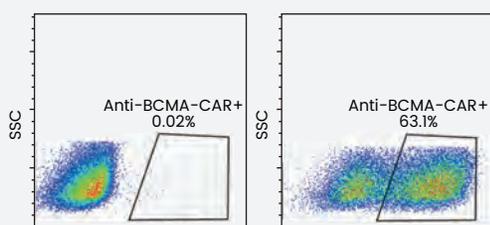
FITC BCMA (Cat#: 10620-H03H-F)

293 cells were lentivirally transduced with anti-BCMA CAR. Flow cytometric analysis was performed with FITC-conjugated recombinant human BCMA. Non-transduced 293 cells were used as a control (left).



PE-CD22 (Cat#: 11958-H08H-P)

Human T cells were lentivirally transduced with anti-CD22 CAR. Flow cytometric analysis was performed with PE-conjugated recombinant human CD22. Non-transduced T cells were used as a control (left).



PE BCMA (Cat#: 10620-H03H-P)

293 cells were lentivirally transduced with anti-BCMA CAR. Flow cytometric analysis was performed with PE-conjugated recombinant human BCMA. Non-transduced 293 cells were used as a control (left).

Conjugated Proteins (Partial)

Molecule	Conjugation
BCMA	PE/FITC/Biotinylated
CD22	PE/Biotinylated
CD33	PE/FITC/Biotinylated
CD38	PE/FITC/Biotinylated
ROR1	Biotinylated
EpCAM	Biotinylated
EGFR	Biotinylated
Her2/ERBB2	Biotinylated
VEGFR2/KDR	Biotinylated
ULBP1	Biotinylated
ULBP2	Biotinylated

Unconjugated Proteins (Partial)

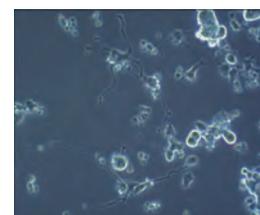
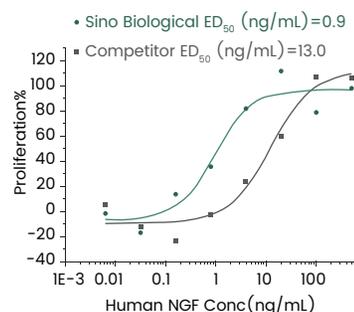
CD19	PD-L1	CD30/TNFRSF8
BCMA	CEACAM5	FAP
CD22	FOLR1	IL3RA
CD33	PD-1	NCAM
CD38	EGFR	ULBP1
Glypican 3	Her2/ERBB2	c-MET
ROR1	VEGFR2/KDR	ULBP2
EpCAM	MUC1	EphA2
Mesothelin	CD70	PSMA
CD20	Syndecan-1/CD138	LICAM
CD5	Carbonic Anhydrase IX	IL13RA2
CD7	IL1RAP/IL-1RAcP	

Cancer Cell Proliferation and Signaling

Cancer cells possess excessive cell proliferation due to sustaining proliferative signaling and evaded growth suppressors. This is manifest by altered expression and/or activity of proteins in proliferative signaling. Many of these proteins are currently under investigation as targets for cancer therapy, such as growth factors, receptor tyrosine kinases (RTKs), and other kinases. Sino Biological has developed a panel of protein and antibody products to support the study of cancer cell proliferation.

Growth Factors

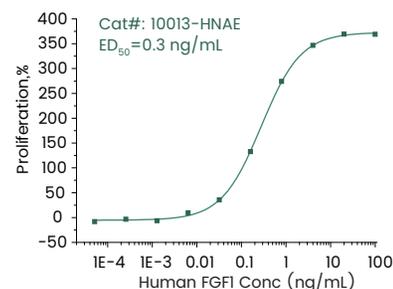
- 300+ growth factor proteins
- 10 species: human, mouse, cynomolgus, rat, canine, etc
- ISO9001:2015 and ISO13485:2016 certified
- High batch to batch consistency
- High purity
- Most proteins are animal component free
- Carrier free (no BSA)



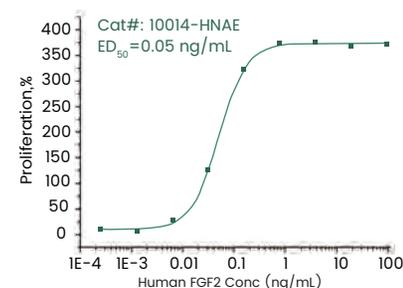
NGF (Cat#: 11050-HNAC) induced the axon growth of PC12 cells in vitro

ED₅₀ & Purity Values

Cat#	Species	Molecule	Purity (%)	ED ₅₀
10013-HNAE	H	FGF1	> 95	50-200 pg/mL
10014-HNAE	H	FGF2	> 95	0.02-0.1 ng/mL
10426-HNAE	H, M, R, Rh, Ca	BMP-2	> 95	0.1-0.5 µg/mL
10451-H08B	H	SCF	> 92	2-8 ng/mL
10463-HNAS	H	HGF	> 93	2-10 ng/mL
10598-HNAE	H	IGF1	> 95	3.5-14 ng/mL
10605-HNAE	H	EGF	> 92	0.15-0.75 ng/mL
11083-HNAS	H	RSPO1	> 95	20-120 ng/mL
11528-HNAE	H	FGF6	> 95	1-6 ng/mL
16010-HNAB	H, Cy	FGF16	> 95	5-15 ng/mL
50038-MNAH	M	HGF	> 95	1-4 ng/mL
50179-MNAE	M, R	FGF1	> 90	0.04-0.2 ng/mL
50316-M08S	M	RSPO1	> 95	0.1-0.9 µg/mL
90286-CNAH	Cy	HGF	> 95	2-10 ng/mL



Measured in a cell proliferation assay using BALB/c 3T3 mouse embryonic fibroblasts.



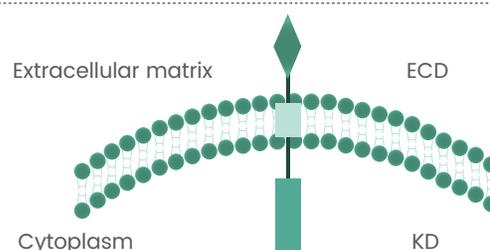
Measured in a cell proliferation assay using BALB/c 3T3 mouse embryonic fibroblasts.

Receptor Tyrosine Kinases (RTKs)

Sino Biological's RTKs with both extracellular domain (ECD) and kinase domain (KD) products available.

Recombinant RTK Proteins

CSF1R	EphA4	Her2/ERBB2	c-MET
DDR1	EphA7	HER3/ERBB3	PDGFRA
DDR2	EphB1	FGFR2	RET
EGFR	EphB2	IGF1R	ROR1
EphA2	EphB4	c-Kit	TIE2



Species abbreviation: H-Human, M-Mouse, R-Rat, Ca-Canine, Cy-Cynomolgus, Fr-Ferret, Z-Zebrafish, Rh-Rhesus

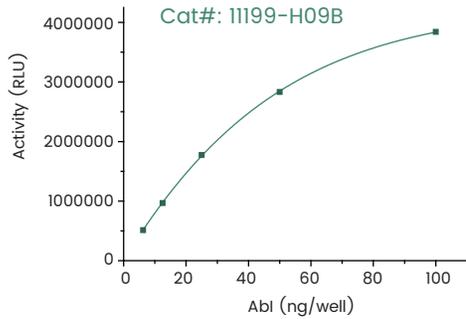
Application abbreviation: WB-Western blot, ELISA-ELISA Capture and/or Detection, FCM-Flow Cytometry, IHC-Immunohistochemistry, ICC/IF-Immunocytochemistry/Immunofluorescence, IP-Immunoprecipitation

Cancer Cell Proliferation and Signaling

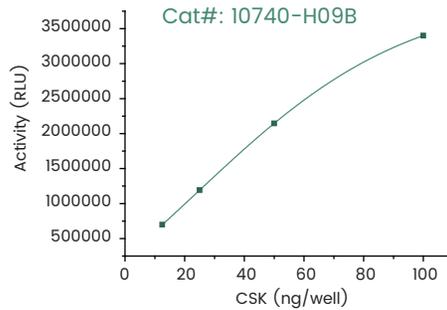
Other Kinases

○ Except for RTKs, we also have other kinases.

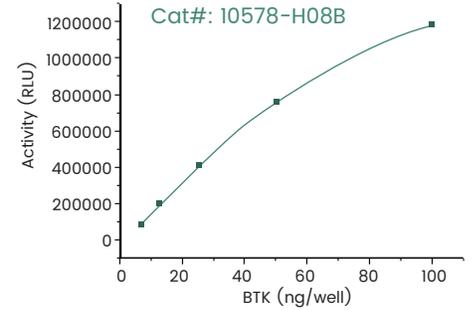
- C-Abl/ABL1
 BLK
 CDKs
 CSK
 PLKs
 Akts
 BTK
 CHKs
 MAPKs
 Src family



Activity assay for Abl using synthetic Abl peptide (EAIYAAPFAKKK) as the substrate



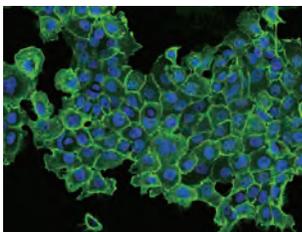
Activity assay for CSK using Poly (Glu, Tyr) 4:1 peptide as the substrate



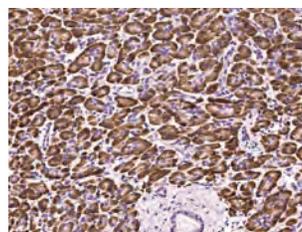
Activity assay for BTK using Poly (Glu, Tyr) 4:1 peptide as the substrate

○ We have over 850 kinase antibodies validated for WB, ELISA, IHC, ICC/IF, FCM, IP, etc.

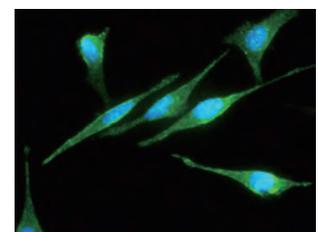
ACVR2A	ACVR2B	BMPRIA/ALK-3	ALK4/ACVR1B	AXL	BMPR2
Brk	CAMKI	CAMKIV	CDK2	CK2 alpha/CSNK2A1	c-Kit
c-MET	CSFIR	DDR1	DDR2	EGFR	EphA1
EphA2	EphA4	EphA6	EphA7	EphB1	EphB2
EphB3	EphB4	EphB6	Her2/ERBB2	HER3/ERBB3	ErbB4
ERK2	IRE1	FGFR1	FGFR2	FGFR4	FGFRL1
FLT1	FLT3	VEGFR3/FLT4	GRK5	IGFIR	Insulin Receptor
JNK1	LOK	MST1	RON/CD136	NGFR	PDGFRA
PDGFRB	PBK/TOPK	RET	Tie-1	TIE2	PBK/TOPK
TrkA	TrkB	TrkC			



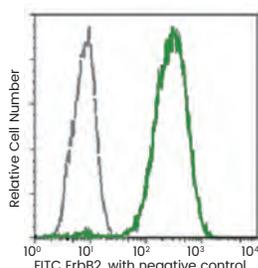
Detection of human EGFR in A431 cells by IF (Cat#: 10001-MM08T)



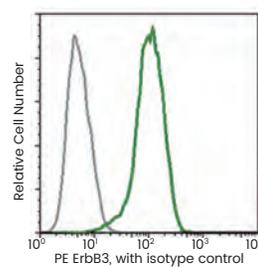
Detection of human FGFR1 in pancreas by IHC (Cat#: 10616-MM09)



Detection of human JNK2 in HeLa cells by IF (Cat#: 10745-MM06)



Detection of human ErbB2 on SK-BR3 cells by FCM (Cat#: 10004-R511-F)



Detection of human ErbB3 on MCF-7 cells by FCM (Cat#: 10201-MM03-P)

Angiogenesis

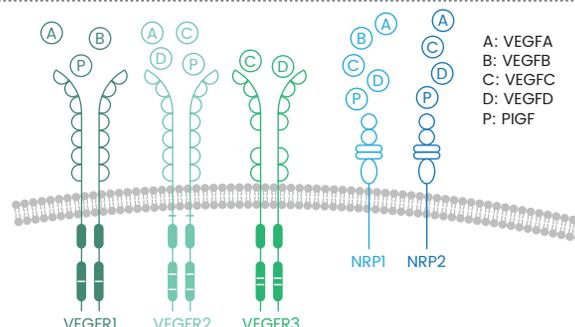
Pathological angiogenesis is a hallmark of cancer and various other diseases. Research in this area leads to the discovery of a growing number of pro- and anti-angiogenic molecules. Some drugs targeting these molecules have already been in the clinical setting. Sino Biological provides reagents and services to support the research and development of therapeutics targeting angiogenesis in cancer and other diseases.

Angiogenesis Growth Factors & Receptors

VEGF Family Members and Receptors

○ Featured VEGF-related Products:

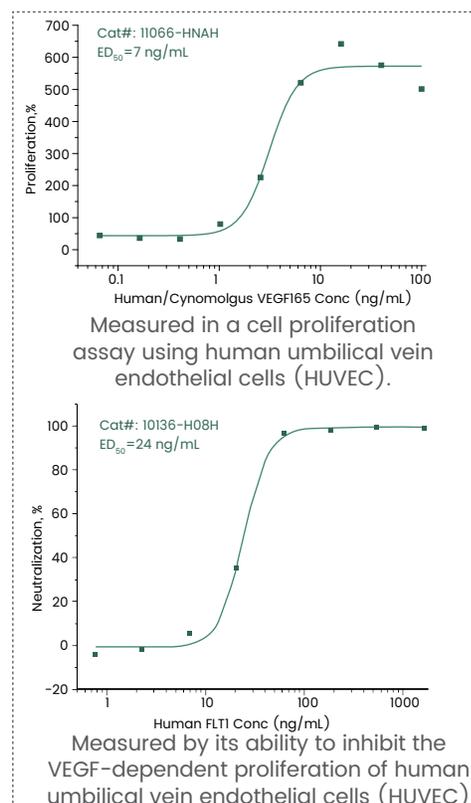
- 65+ Recombinant Proteins
- 100+ Antibodies
- 10+ ELISA kits and ELISA pairs
- 500+ Genes/cDNA
- qPCR Primer/IP Kit/Cell Lysate



Sino Biological has over 65 recombinant VEGF & receptor proteins that cover all VEGF family members, and several isoforms of VEGF. A vast majority of these recombinant proteins were expressed in eukaryotic cells (human cells or insect cells), which ensures proper modification and higher activity of proteins.

Recombinant VEGF & Receptor

Molecule	Protein	Antibody	ELISA Kit
VEGF110	H		
VEGF121	H	H (WB, ELISA, IHC-P, IF)	H
VEGF121b	H		
VEGF164	M, R, Ca	M (ELISA), R (ELISA)	R
VEGF165	H, Cy, Z	H (ELISA, IF, Neutralization)	H
VEGF165b	H		
VEGF183	H	H (ELISA, IHC-P)	
VEGF C	H, M, R	H (ELISA)	
VEGFD	H, M, R	H (ELISA)	
PLGF/PGF	H, M	M (ELISA)	
Neuropilin-1	H, M, Cy	H (ELISA, FCM, IHC-P)	
FLT1	H, M, R	H (ELISA, IF, FCM), R (ELISA)	
VEGFR2/KDR	H, M, R, Cy	H (ELISA, IHC-P, IF, FCM), M (ELISA, FCM), R (ELISA)	H
VEGFR3/FLT4	H, M	H (ELISA, IHC-P), M (ELISA)	H



Other Angiogenesis Growth Factors & Receptors

We also have proteins, antibodies, kits and cDNAs for other angiogenesis growth factors and their receptors, including:

Angiopoietin & Tie

EGF family & receptor

PDGF & PDGFR

FGF & FGFR

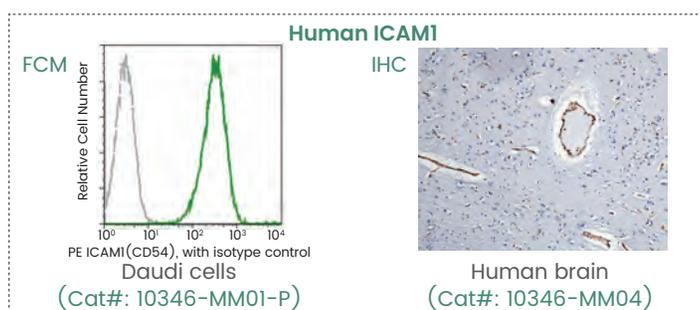
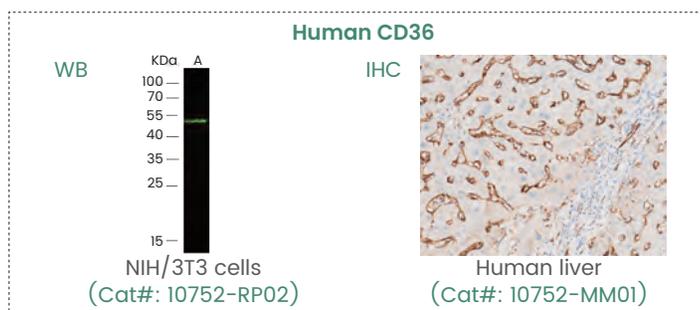
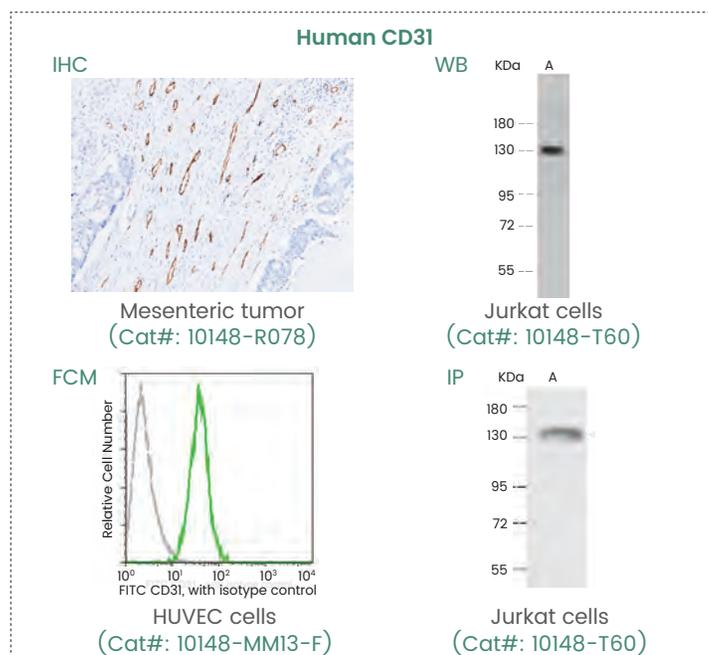
CSF & CSFR

Angiogenesis

Angiogenesis Markers

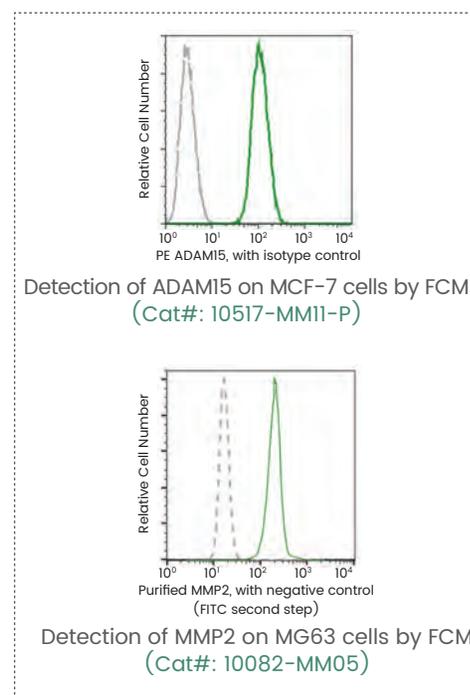
Products for Angiogenesis Markers

Molecule	Protein	Antibody	ELISA Kit
CD31	H, M	H (WB, ELISA, FCM, IHC-P, IF, IP), M (ELISA, FCM, IHC-P)	H
CD34	H, M, R	H (WB, ELISA, FCM, IHC-P), M (ELISA, IHC-P, FCM, IF, IP)	M
CD36	H, M, R, Rh	H (WB, ELISA, IHC-P), M (ELISA, IHC-P, IF), R (WB, ELISA, IHC-P)	
ICAM-1	H, M, R, Rh	H (WB, ELISA, FCM, IHC-P, IF, IP), M (ELISA, FCM, IHC-P, IF), R (WB, ELISA, FCM, IHC-P, IF, IP)	H, M, R
IL-33	H, Ca, Cy	H (WB, ELISA, FCM, IHC-P, IF), Ca (ELISA)	
Von Willebrand Factor/vWF	H	H (ELISA, IHC-P, IF)	H



Proteases in Angiogenesis

Molecule	Protein	Antibody	ELISA Kit
ADAM8/CD156a	H, Rh	H (IHC-P, IF)	
ADAM9	M		
ADAM10		H (WB, IHC-P, IP), R (IHC-P)	
ADAM12	H	H (WB, ELISA, IHC-P, IF, IP)	
ADAM15	H, M	H (ELISA, IHC-P, FCM, IF), M (ELISA)	H
ADAM17	R	H (WB, ELISA, IHC-P, IF, IP)	
ADAM20		H (IHC-P)	
ADAM22		H (IHC-P, IF)	
ADAM23		H (IHC-P)	
MMP1	H	H (ELISA)	
MMP-2	H, M	H (WB, ELISA, FCM), M (WB, ELISA, IP)	
MMP-3	H	H (ELISA), M (WB)	H
MMP7	H		
MMP-8	H, M	H (WB, ELISA, IHC-P), M (ELISA, IHC-P)	H
MMP-9	H, M, R	H (ELISA, IHC-P), M (WB, ELISA), R (ELISA, IHC-P)	H, R
MMP12	H	H (IHC-P, IF)	
MMP13		H (WB, IHC-P, IF)	
MMP-15/MT2-MMP		H (IHC-P)	
MMP19	H		
MMP26	H		



Cancer Biomarker

Cancer biomarkers have many potential applications in oncology, including risk assessment, screening, diagnosis, prognosis, prediction of response to treatment, and monitoring of disease progression. Because of the critical role of biomarkers, rigorous evaluation and research of biomarkers are essential. Sino Biological has developed a panel of reagents to support biomarker research.

Cancer Biomarker Proteins (Partial)

Sino Biological has developed protein products of key cancer biomarkers.

aFGF/FGF1 protein	BDNF/ANON2 protein	C4.4A/LYPD3 protein
CD146/MCAM protein	CD208/DC-LAMP protein	CD38/ADPRC1 protein
CD96/TACTILE protein	CEACAM-1protein	EGFR/HER1 protein
ErbB4/HER4 protein	ICAM-1/CD54 protein	IGFBP3/IGFBP-3 protein
M-CSF/CSF-1 protein	PTHIR/PTHRIprotein	IFNAR2/IFNABR protein
PAI-1 / SerpinE1 protein	PDGFRB/CD140b protein	PRL/Prolactin protein
EEBB3/HER3 protein	TGF-beta 1/TGFBI protein	BCL2/Bcl-2 protein
Urokinase/PLAU protein	S100A11 / S100C protein	CDKN2D/p19ink4d protein

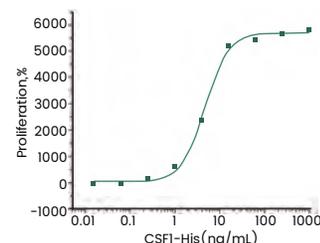
Featured Biomarker Proteins (Partial)

Catalogue	Product name
11646-H01H	Human ADM / Adrenomedullin Protein (Fc Tag)
11976-H08H	Human B2M / Beta-2-microglobulin Protein (His Tag)
10900-H14H	Human CCL5 / RANTES Protein (His & mucin Tag)
50093-M08H	Mouse Fetuin-A / AHSG Protein (His Tag)
51134-M08H	Mouse Alkaline Phosphatase / ALPL Protein (His Tag)
50084-M08H	Mouse Cathepsin B / CTSB Protein (His Tag)
80055-R08B	Rat Erythropoietin / EPO Protein (His Tag)
80574-R08H	Rat ECMI Protein (His Tag)
65003-T08H	Rabbit CD38 Protein (His Tag)
80125-R08H	Rat HER4 / ErbB4 Protein (His Tag)
80306-R08H	Rat EpCAM / TROP-1 / TACSTD1 Protein (His Tag)
50367-M08B	Mouse PRL / Prolactin Protein (His Tag)
50239-M08H	Mouse Cystatin C / CST3 Protein (His Tag)

Featured Biomarker Antibodies (Partial)

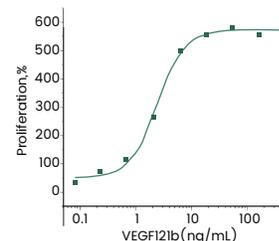
EGFR / HER1 / ErbB1 Antibody	aFGF / FGF1 Antibody
HER2 / ErbB2 Antibody	Ki-67 Antibody
G-CSF / CSF3 Antibody	GM-CSF / CSF2 Antibody
VEGF121 / VEGF-A Antibody	IL12A / IL-12A Antibody
bFGF / FGF2 Antibody	Chromogranin A Antibody
Endoglin / CD105 / ENG Antibody	NSE(Gamma-enolase) Antibody
ECMI antibody	p63 Antibody
VEGFR2 / Flk-1 / CD309 / KDR Antibody	Desmin Antibody
Bcl-2 Antibody	KRT19 Antibody

M-CSF Protein, Human, Recombinant (His Tag)
Cat#: 11792-H08H



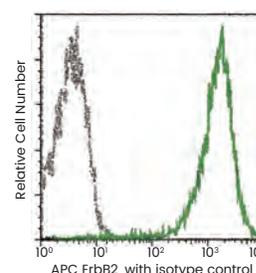
Measured in a cell proliferation assay using M-NFS-60 mouse myelogenous leukemia lymphoblast cells. The ED₅₀ for this effect is typically 2-8 ng/mL.

VEGF121b Protein, Human, Recombinant
Cat#: 15692-HNAH



Measured in a cell proliferation assay using human umbilical vein endothelial cells (HUVEC). The ED₅₀ for this effect is typically 1-5 ng/mL.

Anti-Her2/ERBB2 Antibody (APC), Mouse Monoclonal
Cat#: 10004-MM03-A



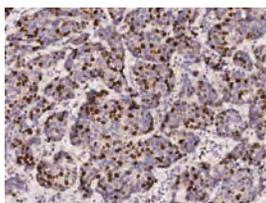
Flow cytometric analysis of anti-Human ErbB2 on SKBR3 cells.

Cancer Biomarker

IHC Validation of Biomarker Antibodies (Partial)

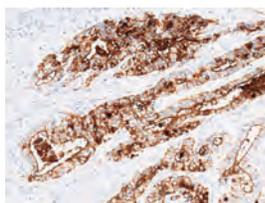
Sino Biological has antibodies for biomarkers of liver, lung, prostate, breast, gastric, ovarian, and other cancers. These antibodies have been validated by immunohistochemistry (IHC) staining of tumor tissues.

Ki-67

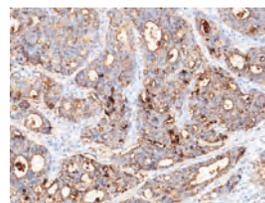


Detection of human Ki-67 in human breast carcinoma by IHC
(Cat#: 100130-MM19)

CEACAM5

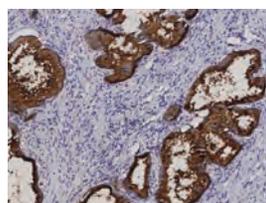


Detection of human CEACAM5 in human rectal cancer by IHC
(Cat#: 11077-R327)



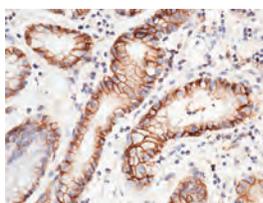
Detection of human CEACAM5 in colon carcinoma by IHC
(Cat#: 11077-R327)

PSA

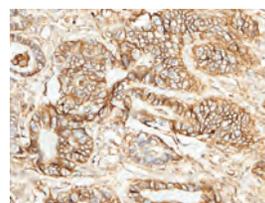


Detection of human PSA in human prostatic carcinoma by IHC
(Cat#: 10771-MM02)

CD147

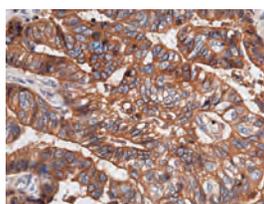


Detection of human CD147 in human gastric cancer by IHC
(Cat#: 10186-R125)



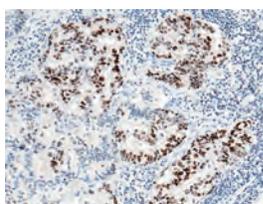
Detection of human CD147 in human rectal cancer by IHC
(Cat#: 10186-R125)

E-cad

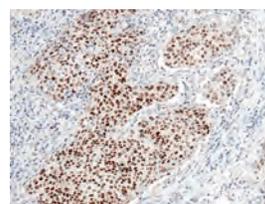


Detection of human E-cadherin in human gastric cancer by IHC
(Cat#: 10204-R032)

p53

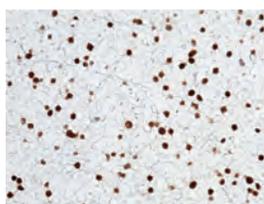


Detection of human p53 in human gastric cancer by IHC
(Cat#: 90001-R002)



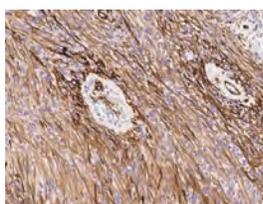
Detection of human p53 in human lung cancer by IHC
(Cat#: 90001-R002)

Olig-2



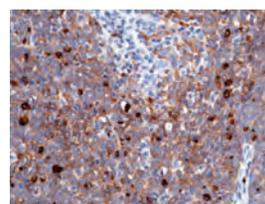
Detection of human Olig-2 in human glioma by IHC
(Cat#: 100137-R064)

Nestin



Detection of human neurilemmoma by IHC
(Cat#: 103270-MM11)

HE4



Detection of human HE4 in human ovarian cancer by IHC
(Cat#: 12609-R404)

Other Tools for Oncology Research

Annexin V/7-AAD Apoptosis Detection Kits



Produced in house



Quality guarantee

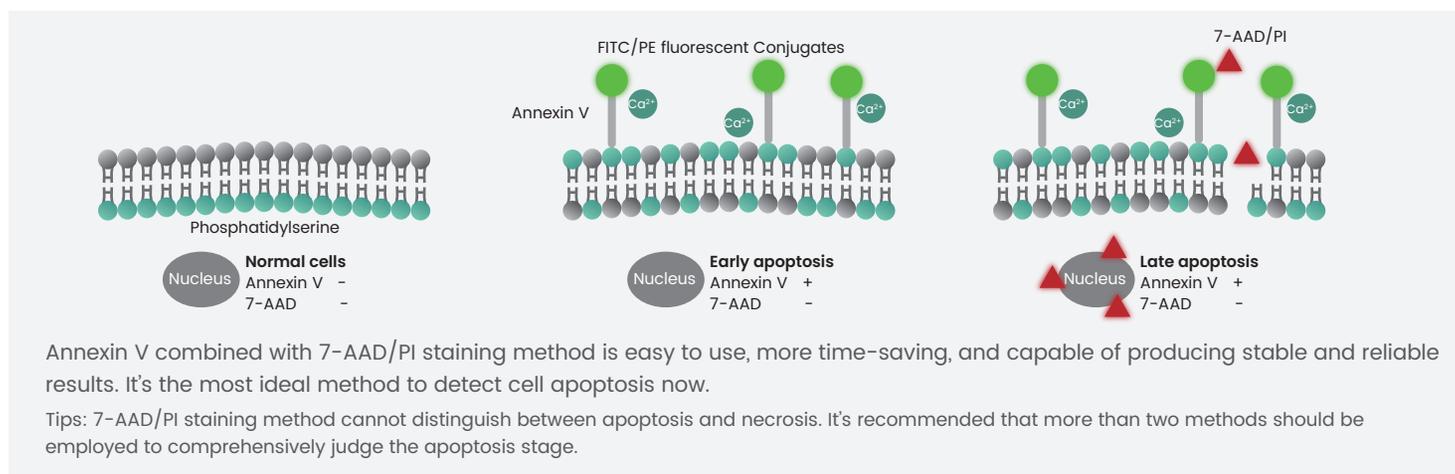


Bulk in stock



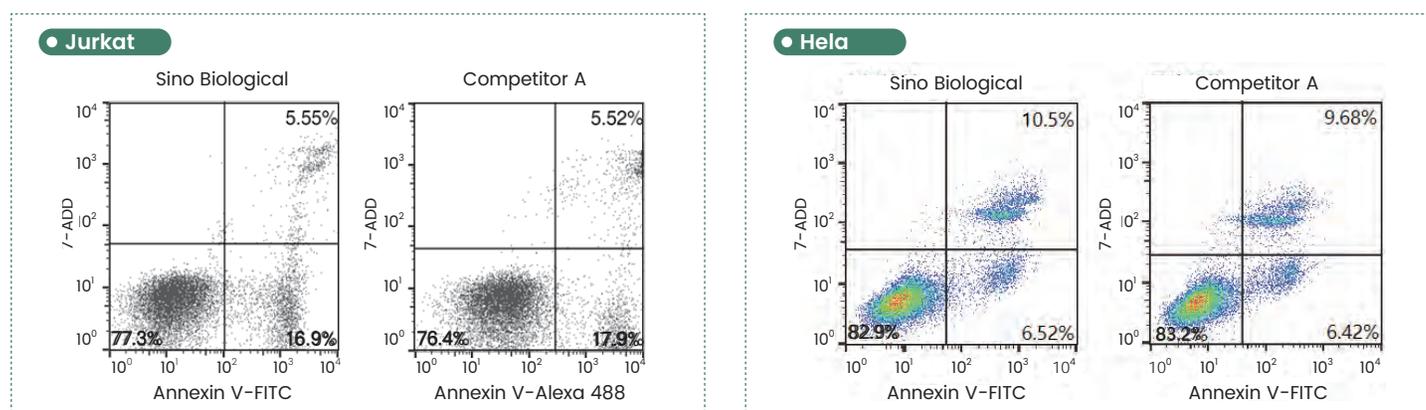
Deliver in 24h

Detection Kit Principle

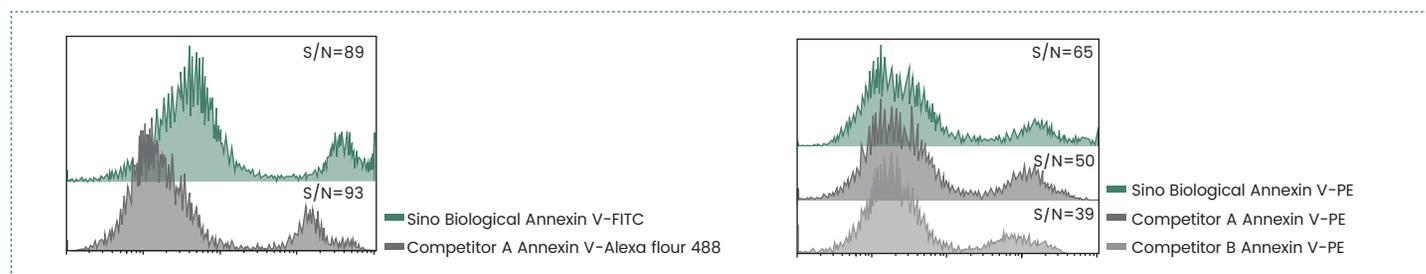


Reliable Sino Biological Apoptosis Detection Kits

Can accurately distinguish early and late apoptosis compared with leading competitor



Best S/N ratio, easy for setting gates to analyze, and more reliable results



Sino Biological Annexin V/7-AAD Apoptosis Detection Kits List

Product Name	Cat#	Size
Annexin V-FITC/7-AAD Apoptosis Detection Kit	APK10448-F	20 Tests, 100 Tests
Annexin V-FPE/7-AAD Apoptosis Detection Kit	APK10448-P	20 Tests, 100 Tests



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