# SB Sino Biological Reagents for Drug Target Research

# **Reagents for Drug Target Research**

Drug target research is crucial in mechanism-based drug discovery and development. Currently, the predominant targets of clinically approved drugs include enzymes, G protein-coupled receptors (GPCRs), CD markers, transporters, ion channels, and nuclear receptors. Identifying new therapeutic targets enables the development of new therapies to expand treatment options for improved patient outcomes.



Sino Biological has developed high-quality bioreagents to support the discovery and development of drug targets.

### **5000+ Reagents for Targeted Biotherapeutics**

Kinases	Proteases	Epigenetic enzymes
Cell therapy targets	Influenza viral enzymes	GPCRs
Cytokines	HIV viral enzymes	Nuclear receptors
CDs	HCV viral enzymes	lon channels
Immune Checkpoints	SARS-CoV-2	

### **Multiple Therapeutic Areas**



### 5,000+ Customers Worldwide



# **Enzyme Proteins as Drug Targets**

Enzymes are indispensable for signal transduction and cell regulation, often via kinases and phosphatases. Many of the enzymes are associated with human cancer initiation and progression. For example, the development of small-molecule kinase inhibitors for treating diverse types of cancer has proven successful in clinical therapy. In addition, viruses also contain enzymes for infecting cells (e.g., HIV integrase and reverse transcriptase) or viral release from cells (e.g., influenza virus neuraminidase).

Sino Biological offers a large penal of research reagents to support the study of enzyme proteins as drug targets.

#### 20,000+ Enzyme Research Reagents

1,000+ Proteins2,000+ Antibodies

• 20,000 genes/cDNA

- - 800+ molecules
  - qPCR Primer/IP Kit/Cell Lysate
  - Covering 11 species

- Superior quality
- Lowest price
- · Quick delivery

### **High Quality Enzyme Proteins**

#### ○ High Purity



#### Validated Activity



### **Antibodies Validated by Various Applications**



Cell proliferation induced by autocrine EGF was neutralized by the human EGFR monoclonal antibody (Cat#: 10001-RE10). The  $IC_{so}$  is typically 0.05-0.2 µg/mL.

IF Antibody



Immunofluorescence staining of EGFR in A431 cells with mouse anti-human EGFR monoclonal antibody (dilution ratio 1:60) (Cat#: 10001-MM08T).

**IHC Antibodies** 



Immunofluorescence staining of EGFR in monkey skin with rabbit monoclonal antibody (1:50, frozen section) (Cat#: 10001-R043).



Immunochemical staining of human EGFR in human placenta with mouse monoclonal antibody (1:60, formalin-fixed paraffin-embedded sections) (Cat#: 10001-MMII).



FITC EGFR, with isotype control

Flow cytometric analysis of EGFR expression on human A431 cells with mouse anti-human EGFR monoclonal antibody (Cat#: 10001-MM08-F).



Immunochemical staining of human EGFR in human rectal carcinoma with mouse monoclonal antibody (1:60, formalin-fixed paraffin embedded sections) (Cat#: 10001-MM11).

# **Enzyme Proteins as Drug Targets**

# Kinases (Partial)

Molecule	Species	Bioactivity	Sequence
EGFR	Human	The specific activity was determined to be>70 nmol/min/mg using Poly (Glu, Tyr) 4:1 as the substrate	Met668-Ala1210
PDGFRA	Human	The specific activity was determined to be 8 nmol/min/mg using MBP as the substrate	Gln551-Leu1089
IGF1R	Human	The specific activity was determined to be 554 nmol/min/mg using Poly (Glu, Tyr) 4:1 as the substrate	Met954-Cys1367
EphA2	Human	The specific activity was determined to be 50 nmol/min/mg using Poly (Glu, Tyr) 4:1 as the substrate	Leu585-Ile976
VEGFR2/KDR	Human	The specific activity was determined to be 10 nmol/min/mg using Poly (Glu, Tyr) 4:1 as the substrate	Asp807-Val1356
ROR1	Human	The specific activity was determined to be 0.3 nmol/min/mg using MBP as the substrate	Met453-Asn783
C-MET	Human	The specific activity was determined to be 10 nmol/min/mg using MBP as the substrate	Lys956-Ser1390
FGFR2	Human	The specific activity was determined to be 28 nmol/min/mg using Poly (Glu, Tyr) 4:1 as the substrate	Met400-Thr821
CD45	Mouse	The specific activity was determined to be 12306 nmol/min/mg using p-nitrophenyl phosphate as the substrate	Arg453-Ser1152

#### **Other Enzymes**

• Recombinant Human FAP Protein (ECD, His Tag)



Cat#: 10464-H07H

Measured by its ability to convert the substrate benzyloxycarbonyl-Gly-Pro-7-amido-4-methylcoumarin (Z-GP-AMC) to Z-Gly-Pro and 7-amino-4-methylcoumarin (AMC). The specific activity is >1,200 pmol/min/µg

#### O NA: Enzymatic Activity



Cat#: 40767-V08B (H1N1, A/Brisbane/02/2018)

Measured NA's ability to cleave 2'-(4-Methylumbelliferyl)- $\alpha$ -D-N-acetylneuraminic acid. The specific activity is 40296 pmoles/min/µg.





#### Cat#: 10688-HNCH

Measured by its ability to cleave the fluorogenic peptide substrate, Gly-Pro-7-amido-4-methylcoumarin (GP-AMC). The specific activity is >2,500 pmol/min/µg



Cat#: 40569-V08B (H3N2, A/Hong Kong/4801/2014)

Measured NA's ability to cleave 2'-(4-Methylumbelliferyl)- $\alpha$ -D-N-acetylneuraminic acid. The specific activity is 29781 pmoles/min/µg.

DPP4/CD26	Factor IX	ENTPD3	PRSS2	CD73	Carbonic Anhydrase IX
FAP	CD39	ADAM17	MMP-9	CD38	Chymotrypsin C
LOXL2	PRSS3	Kallikrein 8	Cathepsin B	Cathepsin S	ADAM8/CD156a

#### **Reagents for Drug Target Research**

## **CD Markers as Drug Targets**

CD antigens are currently used widely for research, immunotherary, cancer therapy, and drug target discovery. CD antigens can act as markers to identify cell type or stage of differentiation, as signaling receptors to alter the behavior of cells, and as cell adhesion molecules in the extracellular matrix. They are also popular cell surface targets for therapeutic antibodies tagged with drugs or radiation-emitting substances to initiate attach to specific cell population. Sino Biological has developed high-quality bioreagents to support the research of CD molecules.

### 16,000+ CD Antigen Products

- 1,200+ Proteins
- Ouick deliverv
- 2,500+ Antibodies • 10,000+ genes/cDNA
- qPCR Primer/IP Kit/Cell Lysate
  - Covering 9 species
- 340+ molecules
- Superior quality

#### CD37 CD19 Lowest price CD23 CD5

# **CD Antigen Products for Different Cell Population**

Sino Biological has developed protein, antibody, and gene products of different CD molecules

### **Recombinant CD8 Proteins**

Binding Activity Validated

Cat#	Species	Monomer	Validated Activity
10980-H08H	Human	CD8a	Bind with Lck.
50389-M08H	Mouse	CD8a	B2M, FCGRT& B2M
60001-F08H	Ferret	CD8a	

#### o CD8 from Various Species Available

Cat#	Species	Monomer	Тад
80285-R02H	Rat	CD8a	Fc
90888-C02H	Cynomolgus	CD8a	Fc
11031-H02H	Human	CD8a	Fc
CT075-H2508H	Human	CD8α & CD8β	His
CT076-M2508H	Mouse	CD8α & CD8β	His

CD52

CD40

CD22

CD20

### **High Quality Protein Products**

		Key Antigens Human	Key Antigens Mouse	
0 1	[ Cell	CD3 CD4 CD8	CD3 CD4 CD8	
0	3 Cell	CD19 CD20	CD19 CD20	
ð I	Dendritic Cell	CDIIC CDI23	CDIIc CDI23	
•	Erythrocyte	CD235a	CD235a	
	Monocyte	CD33	CD33	
0	Granulocyte	CD66b	CD66b	
<b>*</b> * F	Platelet	CD41 CD61 CD62	CD41 CD9 CD62	
HIS E	Endothelial	CD146	CD31 CD106 CD146	
	NK Cell	CD56	CD335	
0 3	Stem Cell	CD34	CD34	
	Vacrophage	CD14	CD11b	
	pithelial	CD326	CD326	

**Antibodies Validated by Various Applications** 



CD71(11020-R016)-human placenta IF



CD114(10218-MM03)-MCF7 cells

CD47 expression plasmid



Transfected into 293H adherent cells Cat: HG12283-CF

**Breast cancer** 



CD117-IHC-P:(11996-R351)





CD340(10004-R511)-SKBR3 cells

**ELISA** FCGR2B / CD32b protein



1E-4 1E-3 0.01 0.1 1 10 Human IgG1/Biotin Con. (ng/mL)

bind to human IgGI (Cat: 10259-H08H)

**Reagents for Drug Target Research** 

# **CD Markers as Drug Targets**

### Flow Cytometry (FACS) Antibodies in Immune Profiling

Sino Biological has developed various antibodies that can be used in immune profiling.

### T cell, B cell, NK cell detection: CD3/CD16/CD56/CD19/CD45 Panel

CD3/CD16/CD56/CD19/CD45 detects the following components in whole blood samples after red blood cell lysis. Proportion of mature lymphocyte subsets: T lymphocytes (CD3+), B lymphocytes (CD19+), NK cells (CD3-CD16+ and/or CD56+).



Target	Тад	Cat #
CD45	PerCP	10086-MM05-C
CD3	APC	CT026-R301-A
CD19	FITC	11880-MM17-F
CD16	PE	10389-MM22-P
CD56	PE	10673-MM05-P
mouse IgGl isotype	PerCP	
mouse IgGl isotype	PE	
mouse IgGl isotype	FITC	

### T cell detection: CD3/CD4/CD8/CD45 Panel

CD3/CD4/CD8/CD45 is used to detect the expression of CD3, CD4, and CD8 in human biological specimens, and to analyze leukemia and lymphatic subgroups. This panel can identify the percentage and absolute counts of mature T lymphocytes (CD3+), helper T lymphocytes (CD3+CD4+) and cytotoxic T lymphocytes (CD3+CD8+) subsets from whole blood samples.



For more FACS antibodies, please visit https://cn.sinobiological.com/category/fcm-facs-antibody

# G protein-coupled receptors (GPCRs)

G protein-coupled receptors (GPCRs) are the largest superfamily of membrane proteins in human. They are integral membrane proteins with seven membrane-spanning helices. GPCRs recognize a variety of ligands and stimuli including peptide and non-peptide hormones and neurotransmitters, chemokines, prostanoids and proteinases, biogenic amines, nucleosides, lipids, growth factors, odorant molecules and light. Sino Biological offers a panel of protein, antibody, and gene products to support the research of GPCR as drug targets.



### **Products for GPCRs Research**

Sino Biological has developed protein, antibody, and gene products of different GPCR molecules.

#### High Quality Protein Products (Partial)



#### Antibodies Validated by Various Applications





IP



IHC

Anti-CCR1/CD191 Cat#: 100449-R002 Anti-CCR1/CD191 Cat#:100449-R002





-R1/CD191 Cat#:10



Flow cytometric analysis of HumanImmunofluorescence staining ofCD192 expression on human wholeHuman CD44 in Hela cells.blood monocytes.Recombinant Anti-CD44 Antibody,Anti-CCR2 Antibody (APC), Cat#:Cat#: 12211-T62

IHC in different tissues

Anti-FZD1 Antibody Cat#: 50092-RP02



Immunochemical staining of human CD44 in human skin and esophagus. Anti-CD44 Antibody, Cat#:12211-T62

100450-MM02-A



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