

Sino Biological: Delivering Pure, Reliable Recombinant Proteins with Expert Support

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Key Account Manager – DE Nord + CEE
Sino Biological Europe GmbH

CONTENT

Overview of Sino Biological

1. Company overview

2. Online products

3. CRO services

- 30+ Global Distributors
Customers in 90+
Countries



SignalChem Biotech
B.C., Canada
(2024)



Branch in Frankfurt, Germany (2019)
Local sales and service team
protein inventory (2-3 days shipping)



Headquarters
Beijing, China
(2007)



Bioprocess Center (C4B)
Houston, Texas, USA
(2023)



Subsidiary in
Philadelphia, PA,
USA (2017)

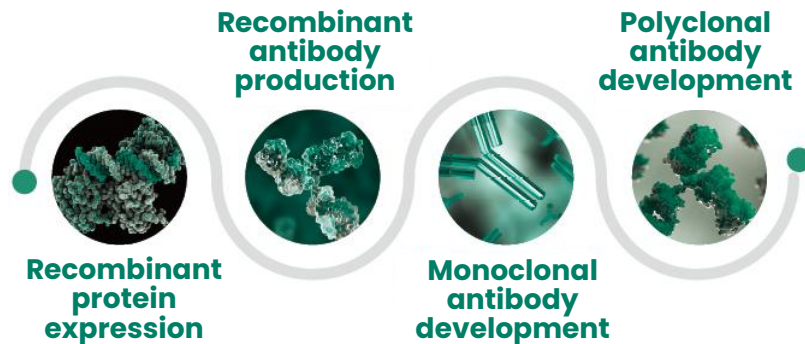


Subsidiary in Kawasaki,
Japan

Company Overview

International Reagent Supplier and Service Provider

High-quality reagents & one-stop CRO services



Citations

>14,000 citations till, 2024

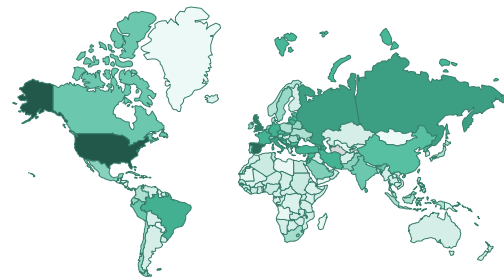


Certification

ISO9001:2015 and ISO13485:2016 certified



User Distribution



End-Users in 90+ Countries

Sino Biological Europe GmbH

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Featured Protein Products

Cytokines & Growth Factors

IL7	IL15
GM-CSF	IL2
Activin A	DLL4
PDGF-BB	Noggin
IL12	IL35
IL19	IL33
TNF-alpha	IL4
IL18	IL8

Antibody Therapeutics

CD98	CD34
c-Kit	TfR
IL1R1	CD19
BCMA	CD3
FCR	PLBL2
ENPP3	Cadherin
HMGB1	TL1A
Integrin	IL23

Viral Antigens

Flu HA/NA/NP	MPXV
RSV	VACV
EBOV	SARS S/N
ZIKV	DENV
CHIKV	CYCMV
EBV	RABV
HPV	HIV
HCov	HCV

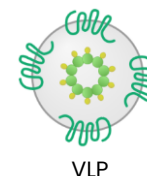
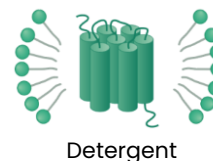
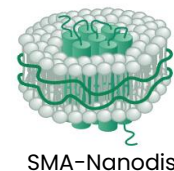
Protein-tags

- Tag-free
- His
- His-AVI
- Fc (h, m)
- FLAG
- Fc-AVI
- SUMO
- Myc

Species

- Human
- Mouse
- Cynomolgus
- Rhesus
- Dog
- Rat
- Rabbit

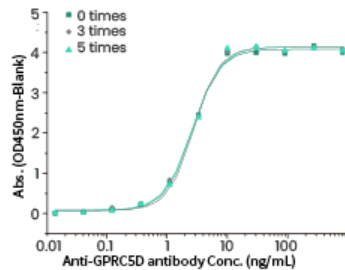
Multi-transmembrane Proteins



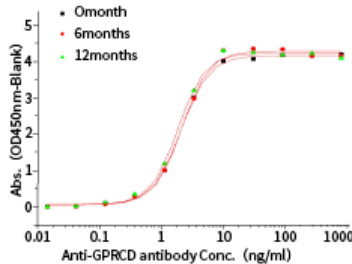
PAR2	GLP1R
CLDN4	GCGR
Claudin-18.2	SSTR2
CXCR4	CB2
GPRC5D	Claudin-6
Claudin-9	Claudin-
CX3CR1	CD63
LGR5	CD151

Multi-pass Transmembrane Proteins

Human GPRC5D-VLP (Full Length)

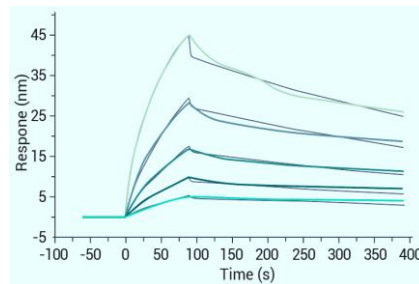


Bio-activity testing ELISA



Real-time stability testing

Human GPRC5D-Nanodisc Protein



Affinity testing by SPR

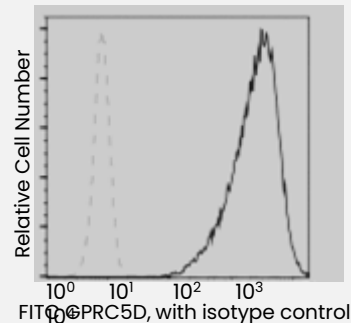
Features

- Lot-to-lot consistency
- High** Stability
- Authentic **target** binding
- Suitable** for immunization to generate mAbs

Selected GPRC5D Antibodies

Target	Cat #	Cross-reactivity	application	Ab type	Conjugate
GPRC5D	24447-MM06	Human	ELISA	Mouse mAb	
GPRC5D	24447-MM08	Human	ELISA	Mouse mAb	
GPRC5D	24447-MM12-A	Human	FCM	Mouse mAb	APC

FCM transfected CHO-K1



Endotoxin-free Products

(below limit of detection / below quantification limit (BQL), < 0.1 EU/mL / < 0.05 EU/mg)

Strengths

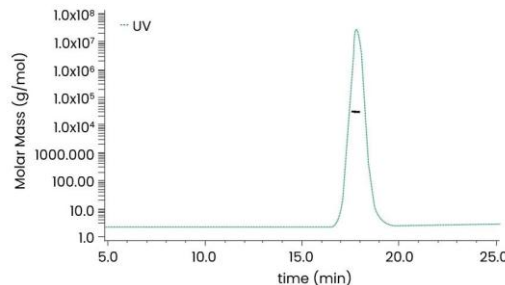
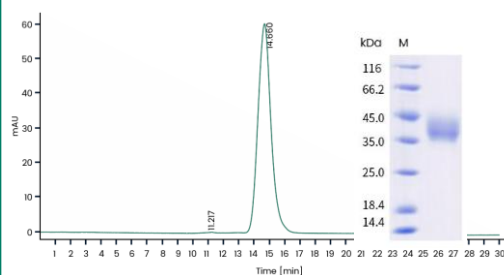
- Mammalian cell expression
- Made in the USA
- Rigorous quality controls

Ahead of competitors

- Competitor A < 10 EU/mg (according to website)
- Competitor B < 100 EU/mg (according to website)
- **C4B < 0.05 EU/mg, below limit of detection (< 0.1 EU/mL)**
- **Antibodies Validated for Various Applications**



Cat: 29849-H08H-UE: Recombinant Human B7-H3 Protein (isoform 2, ECD, His Tag)



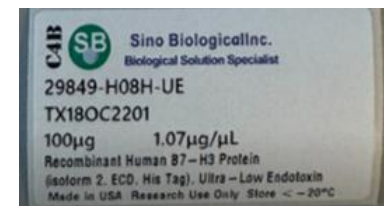
Endotoxin

Below the quantification limit (BQL) as determined by the LAL method

Price:

100 μ g - \$498
1mg - \$3,238

Purity $\geq$ 95 % as determined by SDS-PAGE, $\geq$ 95 % as determined by SEC-HPLC, $\geq$ 90 % as determined by SEC-MALS (Routinely tested).



SignalChem Biotech:

Extensive Range of Active Enzymes & Therapeutic Target Proteins



Highlights



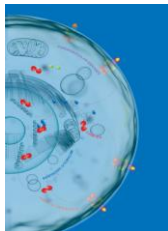
Highly active kinase



QA/QC scrutinized



Activity determined



Active Kinases

- Most comprehensive collection
- Protein, lipid, carbohydrate and mutant kinases
- >1000 functional and active protein kinases

MAPK

PIM1

PI3K

RAF1 (EE)

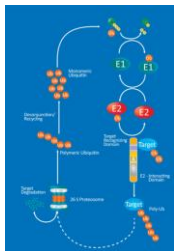
GLK

ULK2

DGKE

PFKFB3

IRAK1



Ubiquitins

- >30 E2 enzymes
- >30 E3 enzymes
- Remarkable substrate specificity

SAE1/UBA2 complex

WWP2

Parkin

Ubiquitin

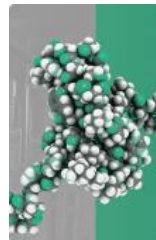
USP2

USP15

USP11

BIRC3

UBE2I (UBC9)



Tau Proteins

- Comprehensive collection of Tau Proteins
- Tau isoform, phospho-tau, mutants

Tau-441, GSK3beta-P

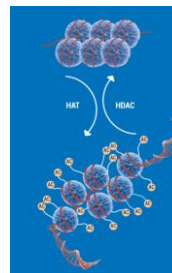
Tau-441, DYRK1A-P

Tau-441

Tau-410

Tau-381

Tau-316



Epigenetic Enzymes

- Histone Deacetylases
- Acetyl Methyltransferases
- Deacetylase /Demethylase
- Comprehensive HDAC & SIRT collection

HDAC1

HDAC4

HDAC6

METTL3/METTL14

SIRT1

SIRT3

SIRT7

KAT6B (MYST4)

Antibodies Validated for Various Applications

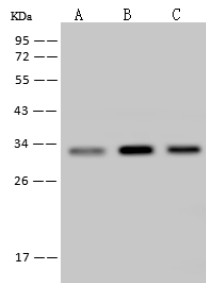


Cytokines Antibodies



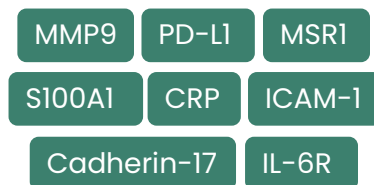
Anti-IL-6 Antibody Mouse Monoclonal

Cat: 10395-MM19 2 Citations



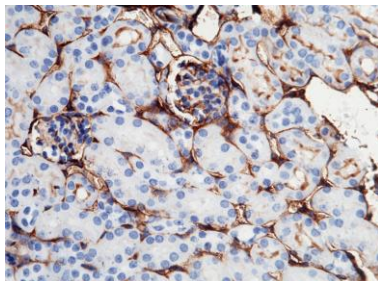
Western blot of IL-6 in whole Cell lysates.
Lanes A: A549; B: HeLa, C: HepG2

Biomarker Antibodies



Anti-ICAM-1 Antibody Rabbit Monoclonal

Cat: 50440-R020 1 Citations



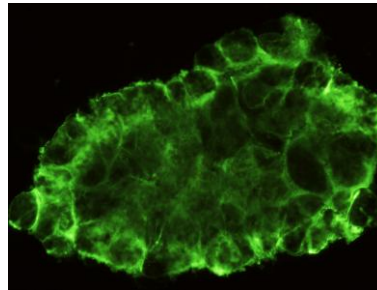
Immunohistochemical staining of mouse ICAM1 in mouse kidney with rabbit monoclonal antibody

Stem Cell Antibodies



Anti-CD31 Antibody, Rabbit Monoclonal

Cat: 10148-R007 1 Citations



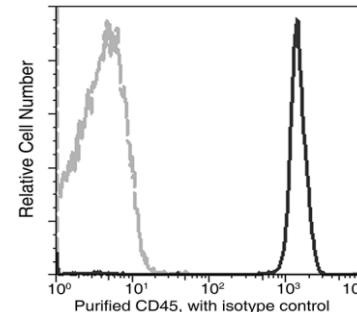
Immunofluorescence staining of Human CD31 in HUVEC cells.

Immunology Antibodies



Anti-CD45 Antibody, Mouse Monoclonal

Cat: 10086-MM05 2 Citations



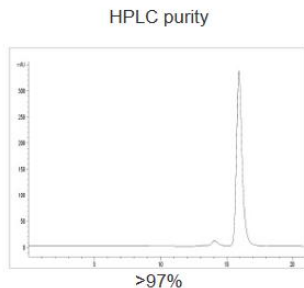
Flow cytometric analysis of Human CD45 expression on human whole blood lymphocytes.

Strict QC System and Various Bioactivity Assays

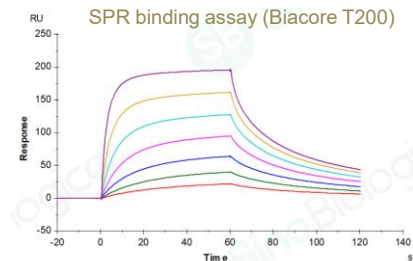
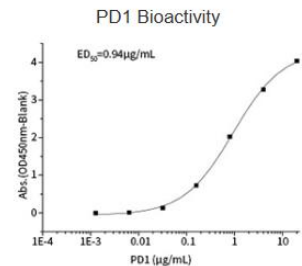
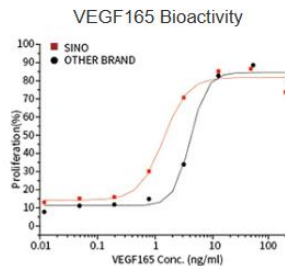
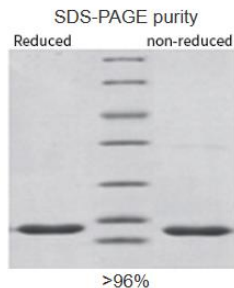


>85% expressed by eukaryotic cells
High purity & low endotoxin

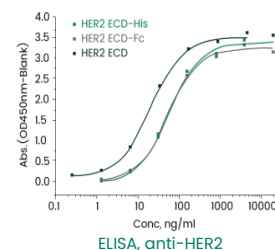
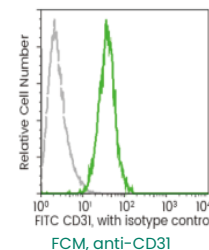
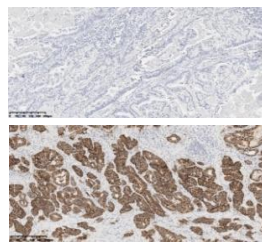
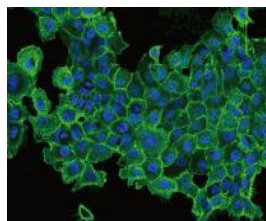
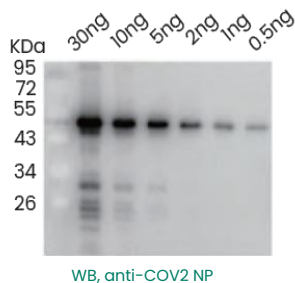
Bioactivity validated
Animal free & carrier free



TNF-alpha (Cat: GMP-10602-HNAE)



For antibodies:



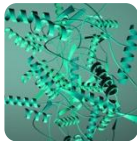
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3. CRO services



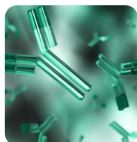
Recombinant Protein Production Services

- Mg-to-gram Scale Production
- Endotoxin-Free, Risk-Free Solutions
- Customized Production Plans to Fit Your Needs
- Assay & Stable Cell Line Development



Recombinant Antibody Production Services

- High-throughput Antibody Production
- Large-scale Antibody Production
- Antibody Fragment & Multi-specific Antibody
- Characterization & Developability

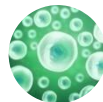


Antibody Development Services

- mAb Development
- pAb Development
- Phospho-specific mAb/pAb Development
- Anti-idiotypic Antibody Development
- Nanobody (VHH) Development, Alpaca-Derived



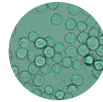
Recombinant Production Platforms



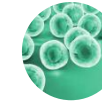
Mammalian
(HEK293, CHO,
Expi™)



Cell-free System
Production



Baculovirus-insect
System



Stable Cell Line/Hybridoma



E. coli System



Full-Length
Transmembrane
(Detergent, Nanodisc,
VLP)

Antibody Development Platforms



Mouse mAb
Development
(Hybridoma)



Rabbit mAb
Development
(Phage Display)



Rabbit pAb
Development



Single B-cell Based
Platform



Nanobody (VHH)
Development



Bioanalytical Services

In vitro Bioactivity, Affinity measurement, Immuno-validation, physical-chemical testing, etc.

Sino Bio and SignalChem Labs



**Center for
Bioprocessing,
Houston, TX, USA**

**Platforms: Expi293,
ExpiCHO**

- **Endotoxin Free Facility**
- Hybridoma culture & purification
- Recombinant Protein and Antibody Production
- BLI Octet Service
- **Next Day Shipping**



**SignalChem BioTech,
Richmond, BC, Canada**

**Platforms: Baculovirus Insect,
*E.coli***

- **Enzyme Production**
- Enzyme Activity Assays
- Compound Profiling
- **Analytical Cell Line**
- Immunization & Serum/PBMC Delivery



**Headquarter in Beijing,
China**

Platforms: HEK293, CHO, insect cells, *E. coli*, TM platform and cell-free

- Antibody-discovery
- **Transmembrane Proteins Production**
- Stable CHO K1 Cell lines
- **Cell-free Expression**
- HTP and scale-up production



Endotoxin-Free Production in Houston



Endotoxin-free plasmids



Endotoxin-free buffer with
filtration



Low endotoxin-affinity plastic
containers



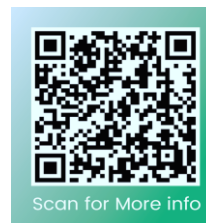
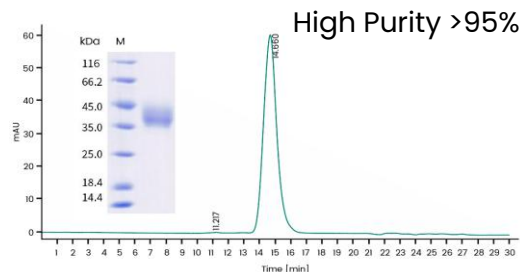
Regular Clean-in-place
(CIP)

ET-FREE production features

- Off-the-shelf products and made-to-order services
- Selected list available for immediate purchase
- Made-to-order products ready in as little as 3 weeks
- Up to 50L culture per batch (gram level production)
- ET-free and HPLC-verification

Molecules

B7-H3	IL-7	ST2/IL-1RL1	SLC39A6/LIV-1	Cadherin-6
TROP-2	IL-19	PCSK9	CD3E	PLAUR
PD-L1/B7-H1	IL-24	LAG3	CTLA4	ROR1
4-1BB/CD137	SL	CEACAM5	4-1BB	PD1
CD33	KDR	CD40	CD25	MSLN

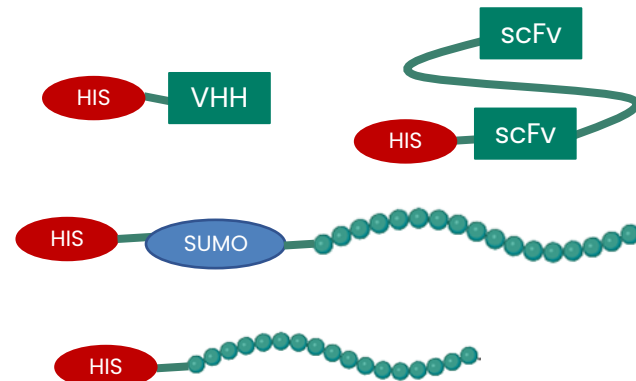


Scan for More info

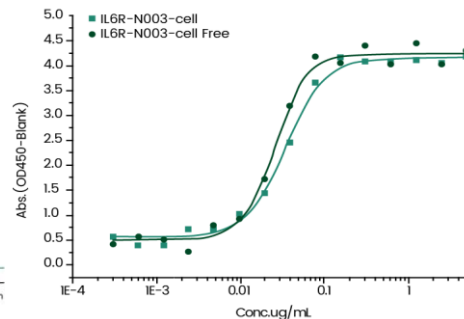
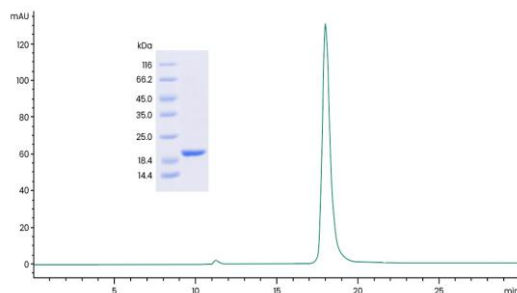
Cell-free Platform

Optimized for Small Antibody Fragments & Peptides (30–200 AA)

- 2 weeks from gene synthesis to purified antibody/peptide
- His-tag and Sumo-tag options
- Fast reaction times: 3–5 hours with milliliter-scale volumes
- Delivers up to 2mg of high-quality purified sample
- **Ideal for fast HTP screening**



95% pure CFS-expressed VHH binds target comparable to HEK293



Free Trial of Recombinant Production by CFPS

Protein or Antibody Expression

Samples: 3 x 10mL or 3 x 1mg

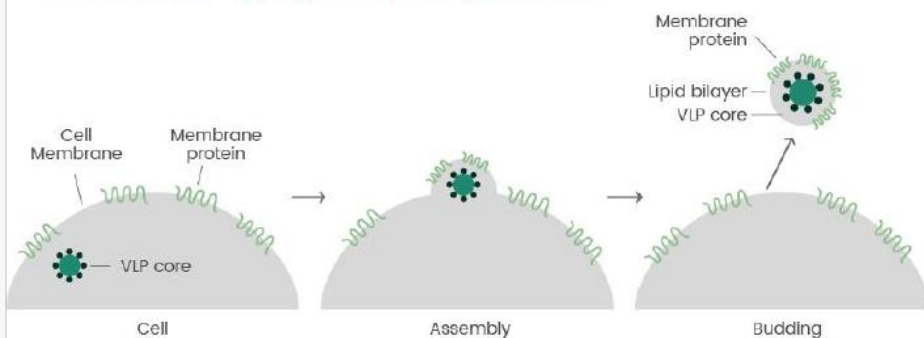
[Learn More](#)

New Customers Only
Duration: Until December 31st

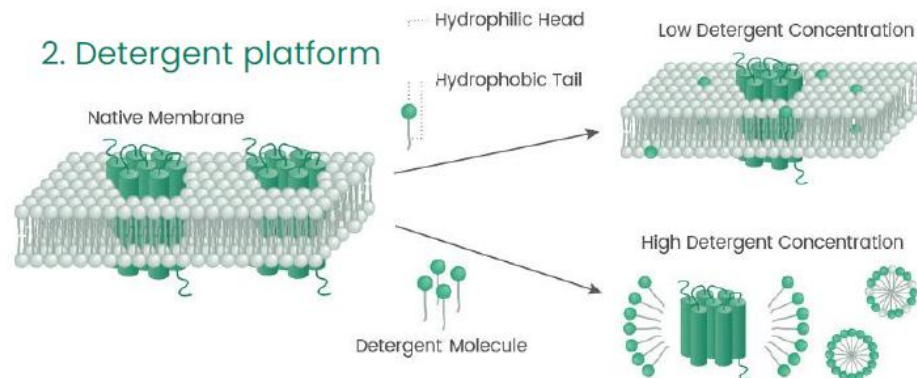


Membrane Protein Production Service

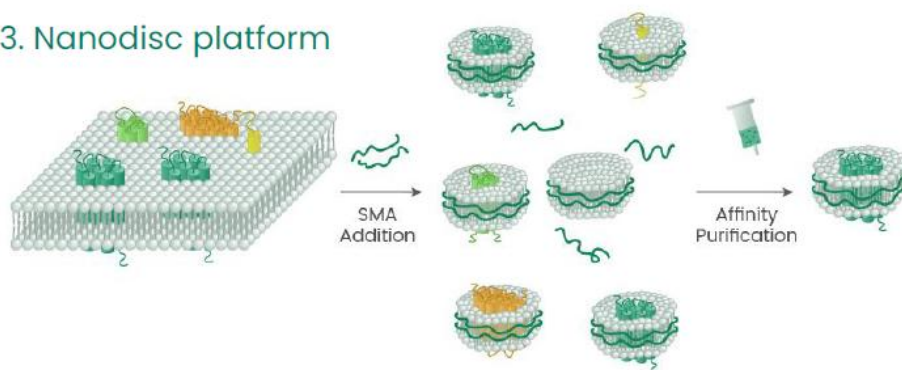
1. VLP(virus-like particles) platform



2. Detergent platform

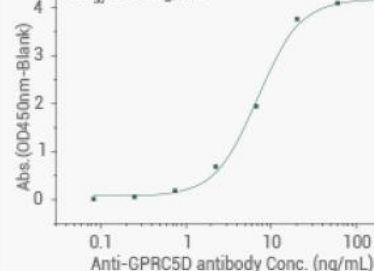


3. Nanodisc platform



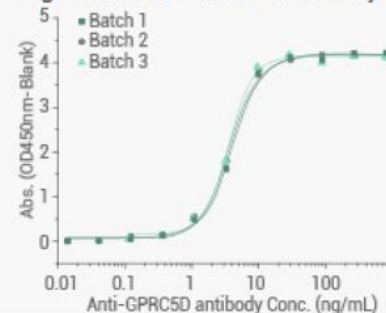
High Bioactivity

$EC_{50} = 3-10 \text{ ng/mL}$



immobilized Human GPRC5D-VLP (Full Length) Protein at 5 $\mu\text{g/mL}$ binds anti-GPRC5D antibody.

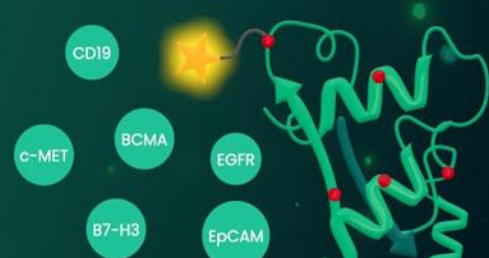
High Batch-to-batch Consistency



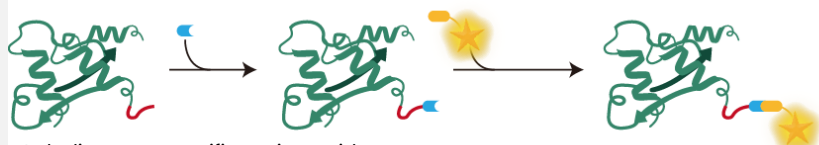
Immobilized Human GPRC5D-VLP (Full Length) Protein at 5 $\mu\text{g/mL}$ binds anti-GPRC5D antibody.

Site-specific Labeling Technology Platform and Products

- Designed for Cell Detection
- High Activity, Specificity, Stability, and Batch-to-batch Consistency

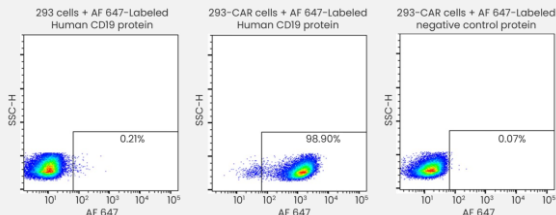


Sino Biological Site-specific Labeling Strategy and Advantages



- Labeling at a specific amino acid
- Precise labeling positions and quantities
- Maintain natural conformation and activity
- High consistency between and within batches

CAR-293 Detection



Flow cytometric analysis of anti-CD19 CAR expression. 5e5 of anti-CD19 CAR-293 cells were stained with 100 μ L of 2 μ g/ml of AF 647-conjugated human CD19 Protein (Site-Specific AF 647-Conjugated, Cat#:I1880-H08W1-SG) and negative control protein. Non-transduced 293 cells were used as a control (left). AF 647 signal was used to evaluate the binding activity.

CAR Cell Batch Release & Testing (QC tested)

PBMC Batch Release & Testing (QC tested)

Activity Validation (routinely tested)

Stability Validation (routinely tested)

**Stringent
Quality
Control**

Purity Verification (routinely tested)

Labeling with High-quality Proteins (routinely tested)

Recombinant Antibody Production Capacity



HTP expression capability

- **>1000 Abs/project**

Large-scale production capacity

- **>40+** Incubator Shakers
- **>90+** Bioreactors: 2L ~ 1,500L

Three production centers

Beijing/Taizhou/Texas

Flexible scale

μg ~kg

Short leadtime

From gene to purified antibody at fastest 2weeks

Superior quality

>99% by SEC-HPLC
<1EU/mg Endotoxin

Various types

scFv/Fab/VHH
BsAb, Fusion Protein
Chimeric Antibody
IgG/IgM/IgA/IgE/IgD

Comprehensive QC analysis

SEC-HPLC, SEC-MALS,
Endotoxin
ELISA, SPR/BLI, FCM,
Cell-based assay, etc.

GeniRobot



Incubator Shakers



Bioreactors

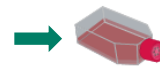


Therapeutic Antibody Development

- >19,000 clones developed
- 60 days, Positive clone available
- 10^{-12} M Binding affinity
- >90% Project success rate

Hybridoma

1



Phage Display

2

- >3,000 rabbit mAbs generated
- 10^9 antibody library size
- >90% Project success rate



3

Single B Cell

- 1 day for cell sorting
- $> 10^3 \sim 10^4$ B cells

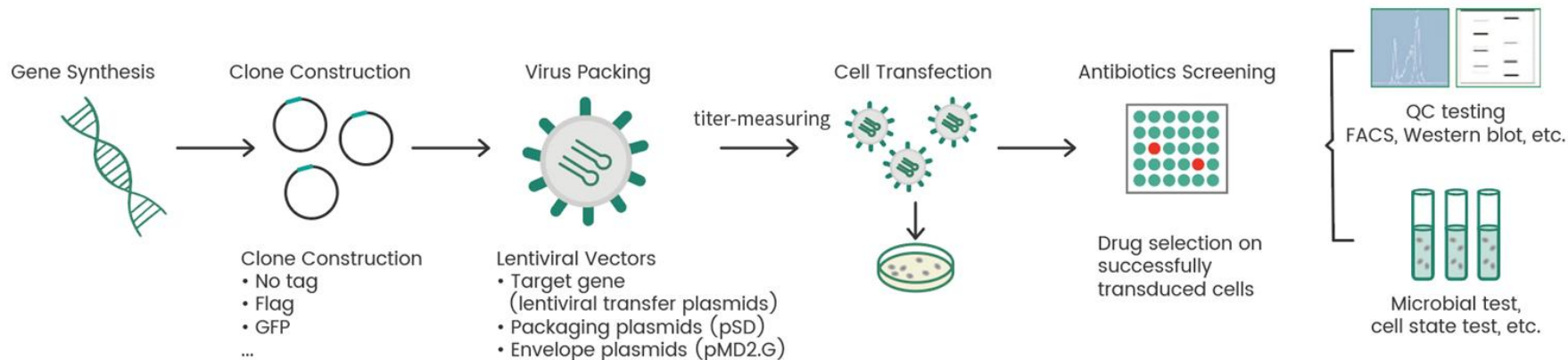


$V_H D J_H$

$V_K J_K$



Analytical Cell Line Service



Timeline & Deliverables

- Est. 8–10 Weeks
- QC (qPCR)
- Optional: WB, FACS, Microscopy, etc.



Highlights of Sino Biological's CRO service



- ✓ **One-stop** CRO service provider
- ✓ **Local and exclusive team** for your project with in-time updates
- ✓ **10 thousand of research projects** in-house and our researchers have **15+ years** of experience
- ✓ Our facilities can handle **large-scale** production, ~1500L, Up to **hundred grams** level
- ✓ Competitive price & fast turnaround time
- ✓ **US- and Canadian-bioprocessing site** for CRO
- ✓ **Cell line development**



THANK YOU

Sino Biological Europe GmbH

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