

Optimizing Cell and Gene Therapy Workflows with High-Performance Proteins and Antibodies

Sino Biological Europe GmbH

CONTENT

Overview of Sino Biological

1. Company overview
2. Online products
3. CRO services

Global Presence

- Direct sales in China, North America, Europe, Japan
- 60+ Global Distributors
- Customers in 90+ Countries



Subsidiary
Wayne, PA, USA



SignalChem Biotech
Richmond, B.C., Canada



Center for bioprocessing
Texas, USA



Frankfurt, Germany

Local sales and service team with
protein inventory



Subsidiary
Frankfurt, Germany



Headquarters, Beijing, China



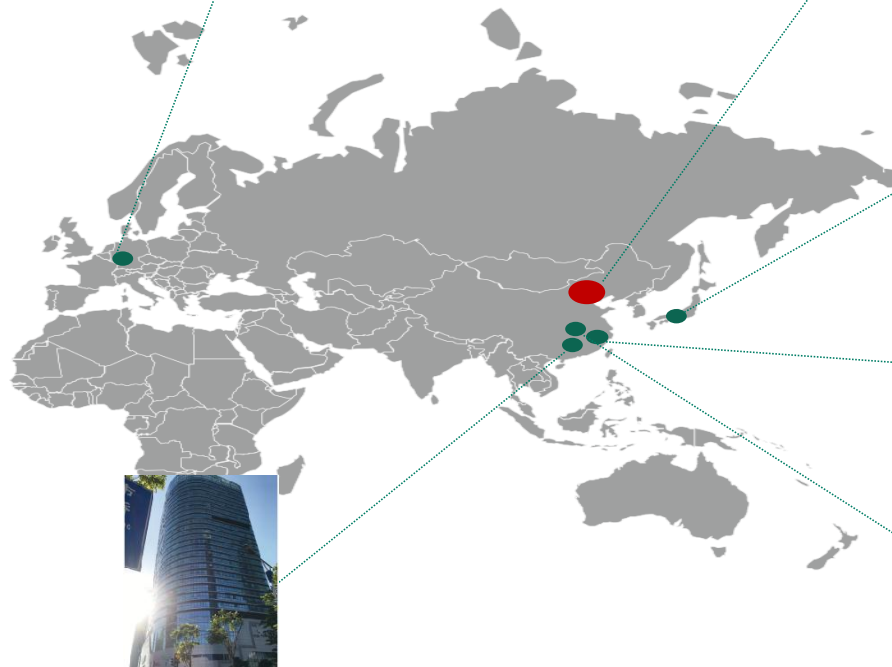
Subsidiary, Japan



Subsidiary, TaiZhou, China



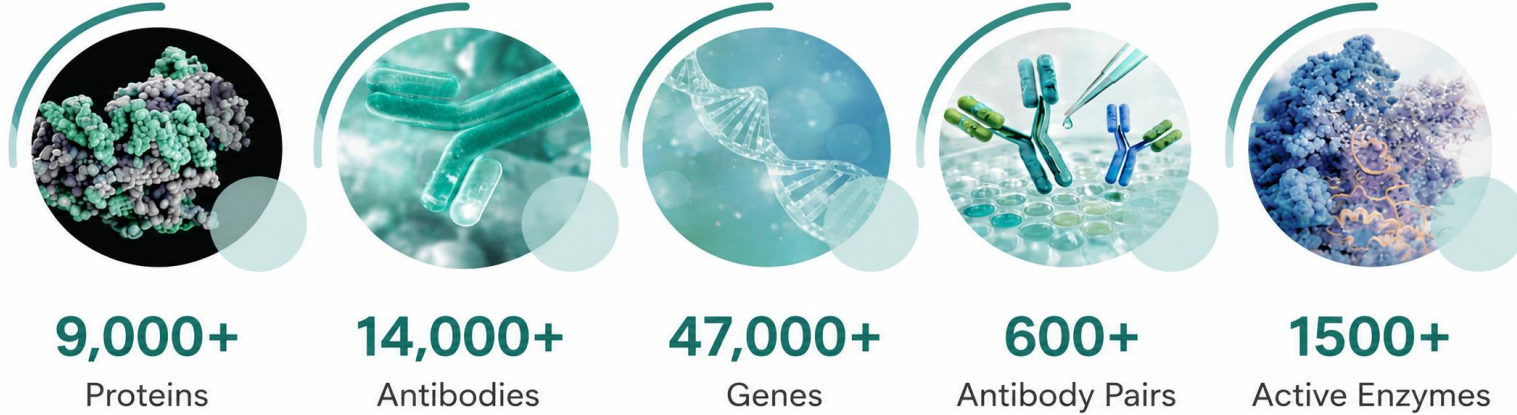
Subsidiary, SuZhou, China



Branch, GuangZhou, China

One-stop Bioreagents and Services Provider

Cat. Products



CRO services



Citations

>27,740 citations till Jan, 2026

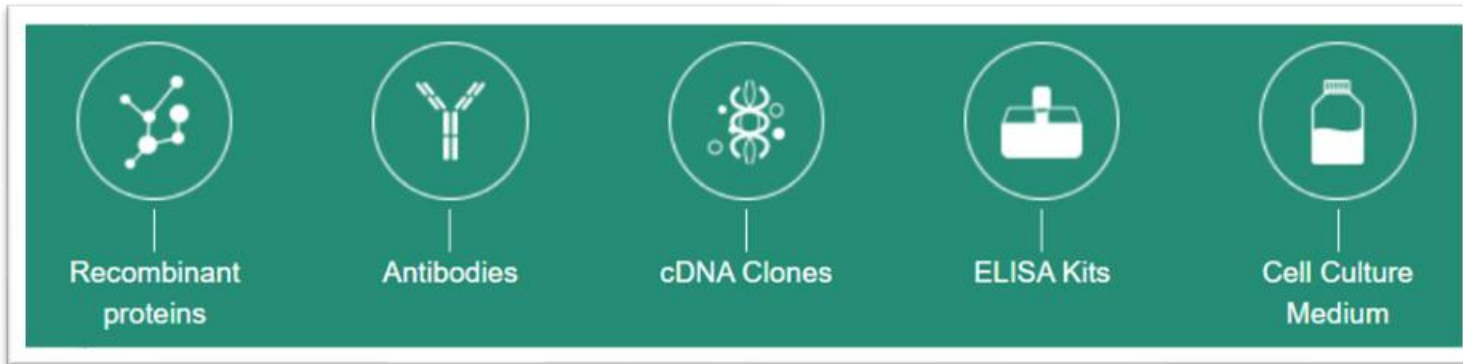


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Featured Products



- ☐ 85% proteins are expressed by mammalian cell
- ☐ Expression of recombinant proteins from different species e.g. human, mouse, rat, cyno etc
- ☐ 100% developed and produced in house

CAR-T Targets Proteins

Immune Checkpoints

Viral proteins (ProVir™)

Neurobiology Proteins

Isotype control Antibody

Cytokines & Growth Factors

Biomarker Proteins

Drug targets

Fluorescence Proteins

Antibody Pairs

Membrane Proteins

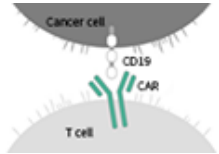
Active Kinase&Phosphatase

Stem cell Proteins

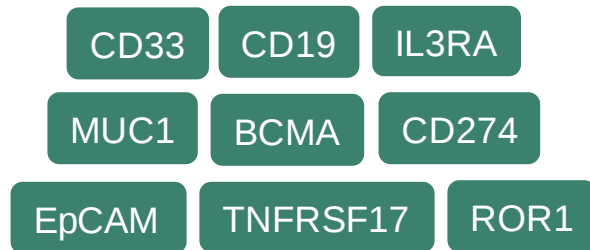
GMP-grade SuperNuclease

Elite Rabbit Mab (EliteRmab®)

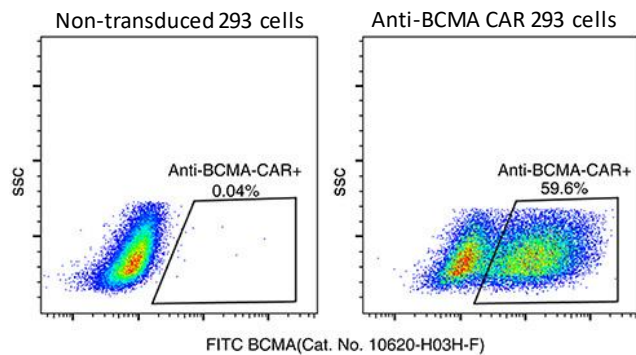
Featured Therapeutic Targets



CAR-T Cell Therapy Targets



Human BCMA Protein (FITC) 10620-H03H-F



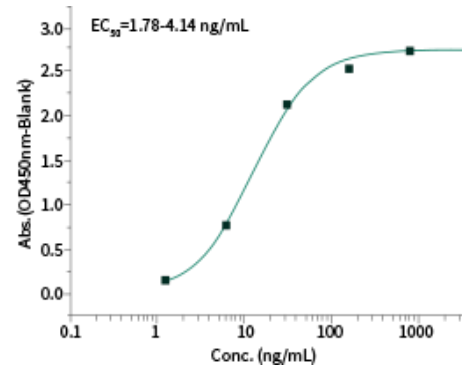
Flow cytometry: FITC-conjugated recombinant anti-BCMA protein in transduced HEK-293 cells.



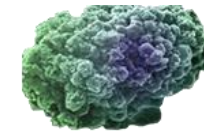
Immunotherapy Targets



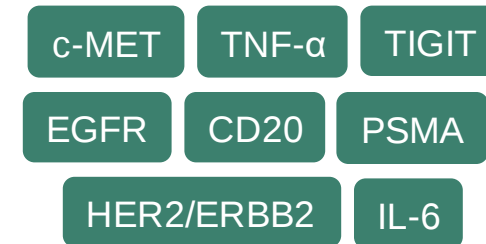
Human IL-22BP Protein 11025-H08H 2 Citations



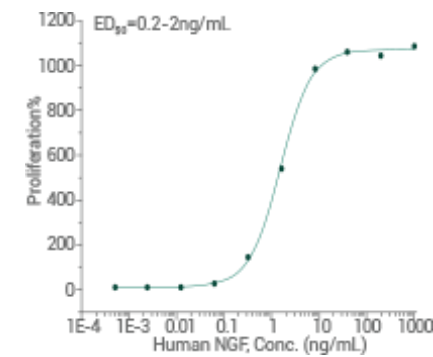
Immobilized IL22BP-His binds biotinylated IL22 (Cat#: 13059-HNAE).



Antibody Therapeutic Targets



Human NGF Protein 11050-HNAC 2 Citations



Activity: Cell proliferation assay using TF-1 human erythroleukemic cells

Premium Cytokines

- 250+ molecules, 950+ cytokine products
- Cover all cytokine families
- 12+ species
- High-quality, competitive prices, high activity validated, batch-to-batch consistency ensuring reproducible results

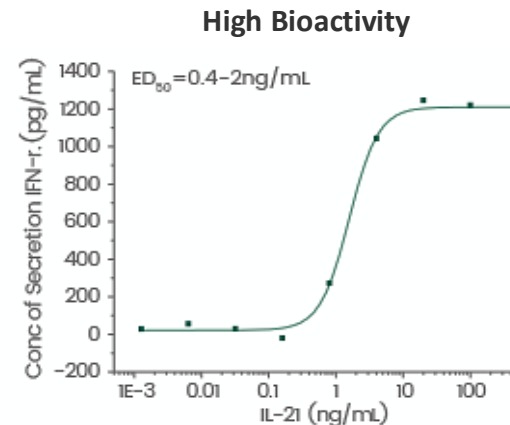
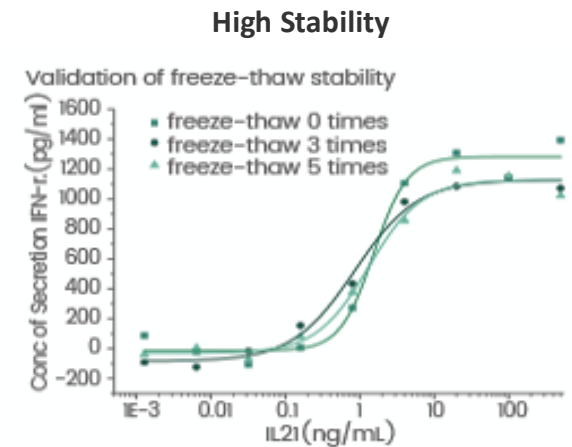
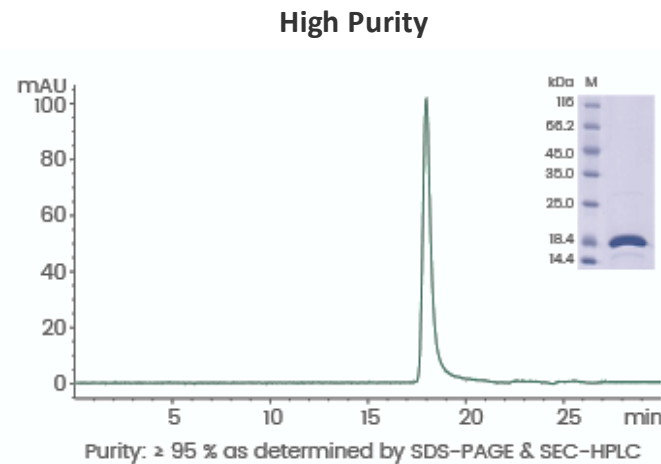
GMP-Grade Cytokines

In compliance with GMP standards

- GMP-grade Quality Management System
- Quality Assurance Management System
- Quality Control System
- Product Safety Testing System
- Quality System Certification

20+ GMP-grade cytokines for stem cell research, T-cell, NK-cell, and DC-cell-based therapies

GMP-Grade Human Interleukin-21 / IL-21 Protein | GMP-10584-HNAE



Induced Interferon gamma secretion by human natural killer lymphoma NK-92 cells



WINNER

SINO BIOLOGICAL

GROWTH FACTOR SUPPLIER
TO WATCH IN 2024



Endotoxin-Free Protein Platform

Endotoxin-Free

High purity

Ideal for pre-clinical studies

Ready to use for animal injections



Endotoxin-free plasmids



Endotoxin-free buffer with filtration



Low endotoxin-affinity plastic containers

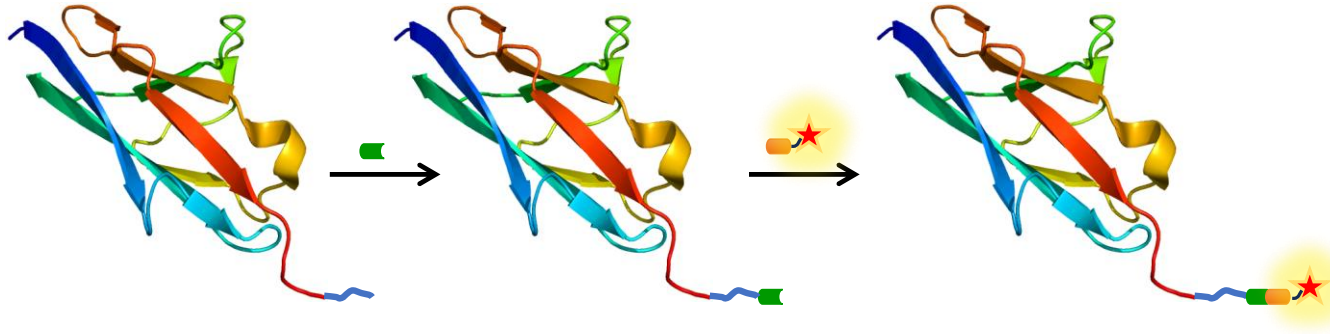


Regular Clean-in-place (CIP)

Sino Biological's Endotoxin-Free Guarantee: Our Assurance of Quality

- Integrate endotoxin control throughout the entire production process
- Endotoxin levels < 0.5 EU/mg to < 0.05 EU/mg
- Ideal for animal immunization, cell-based assays
- Covering ADC targets, cell therapy-related, immune checkpoints, cytokines, viral antigens, etc.

Site-specific Biotin and Fluorescent Labeling



Functional cell testing: CAR-T cell and PBMC detected by FACS

Activity Validation: Native conformation and activity

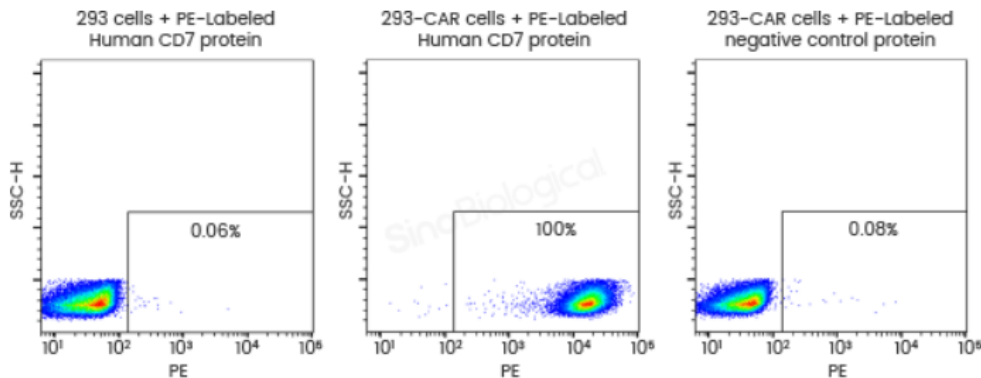
Stability Validation: stable throughout multiple freeze-thaw cycles

Various fluorescent type: APC, AF488, PE and AF647

In Vivo CAR Effector Cell Surface Markers

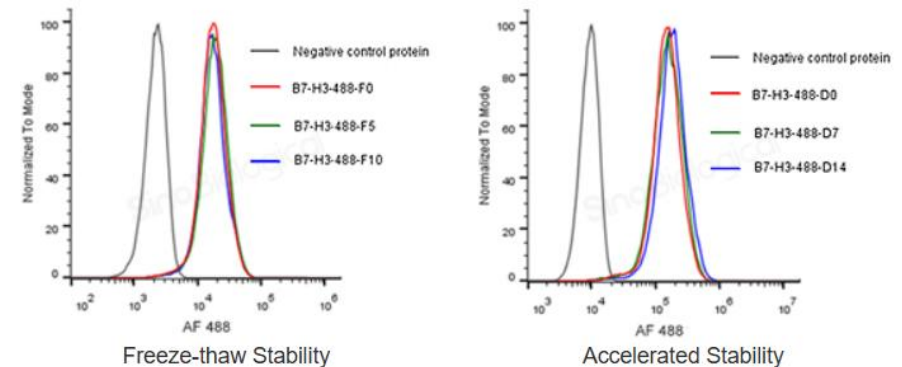
CD3D & CD3E, CD8a, CD4, CD5, CD7, CD56

Human CD7 Protein
(Site-Specific PE Conjugation, His Tag)
Cat#: 11028-H86H-SP



CAR Cell Batch Release & Testing: High Specificity and Sensitivity

Human B7-H3 Protein
(Site-Specific AF 488 Conjugation)
Cat#: 11188-H86H-SD



Stability Validation

Featured Catalog Products- Antibodies and ELISA kits

14,000+ primary antibodies

Primary Antibodies

Secondary Antibodies

Tagged Antibodies

Loading Control Antibodies

Phospho-Specific Antibodies

Elite Rabbit Mab (EliteRmab®)

Neutralizing Antibodies

Anti-payload antibodies

GMP-Antibodies

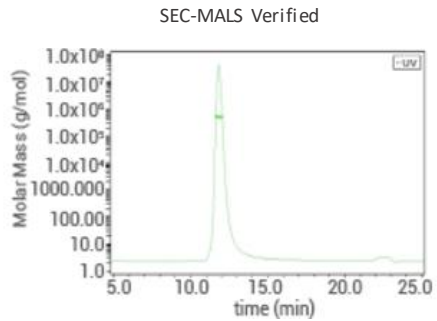
Biosimilars

Antibody Pairs

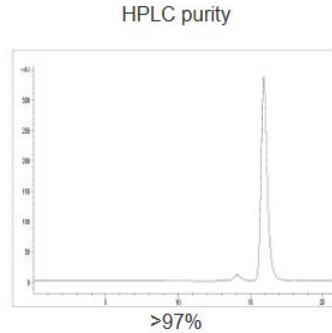
IHC Antibodies

Strict QC System and Various Bioactivity Assays

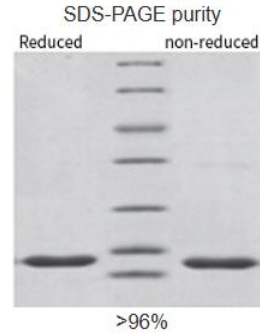
300+ Protein binding assays



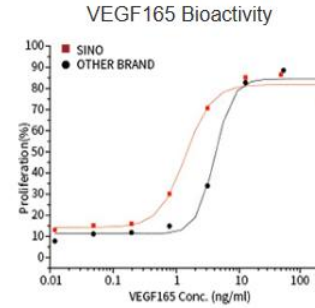
SARS-CoV-2 Spike S1+S2 Trimer



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

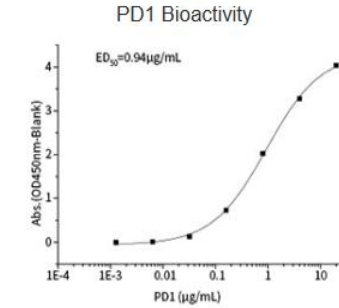


100+ Cell-based assays

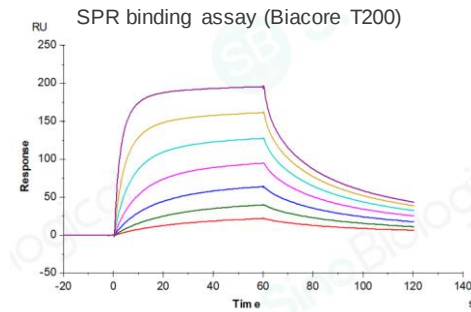


Cell (HUVEC) proliferation

1500+ Protein functional assays

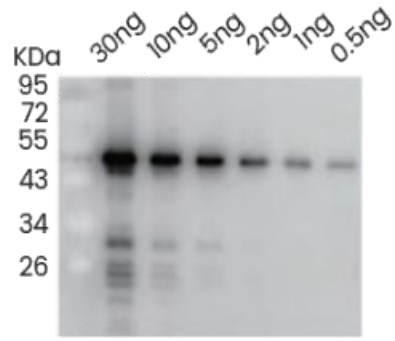


PD-1 (10377-H03H) bind to PD_L2

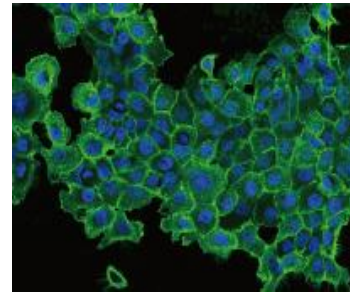


FCGRT & B2M Heterodimer Protein

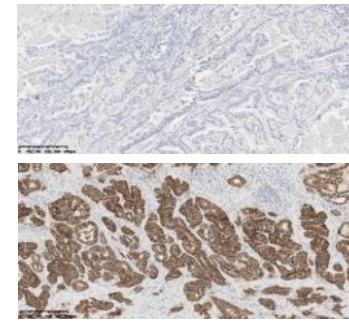
For antibodies:



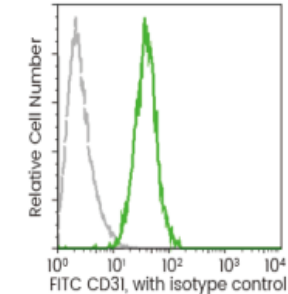
WB, anti-COV2 NP



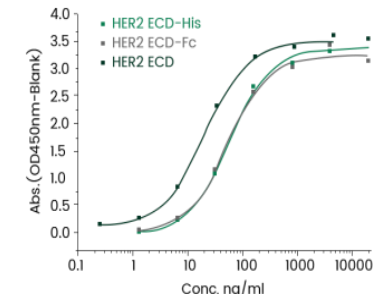
IF, anti-EGFR



IHC, anti-Claudin 18.2



FCM, anti-CD31



ELISA, anti-HER2

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1. Company overview

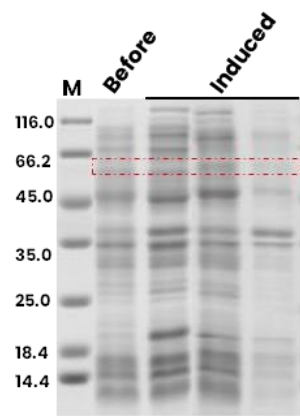
2. Online products

3. CRO services

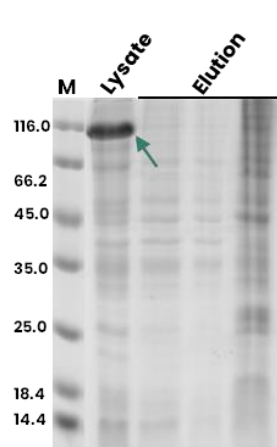
- Recombinant protein expression
- Recombinant antibody expression
- Antibody development

Recombinant Protein Production Service

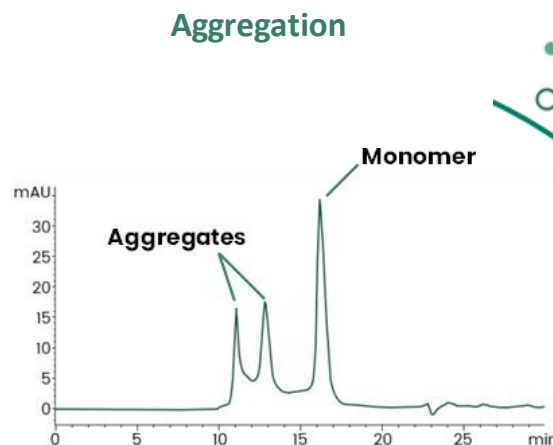
Low Expression Level



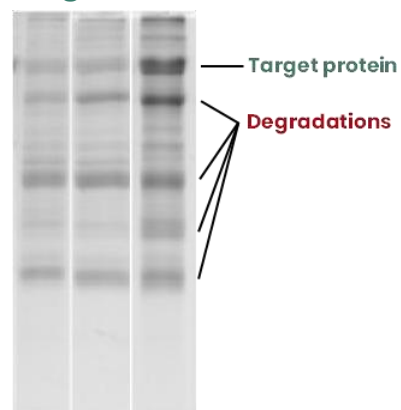
Insolubility



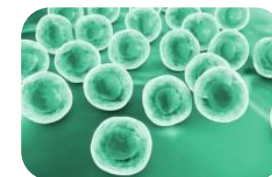
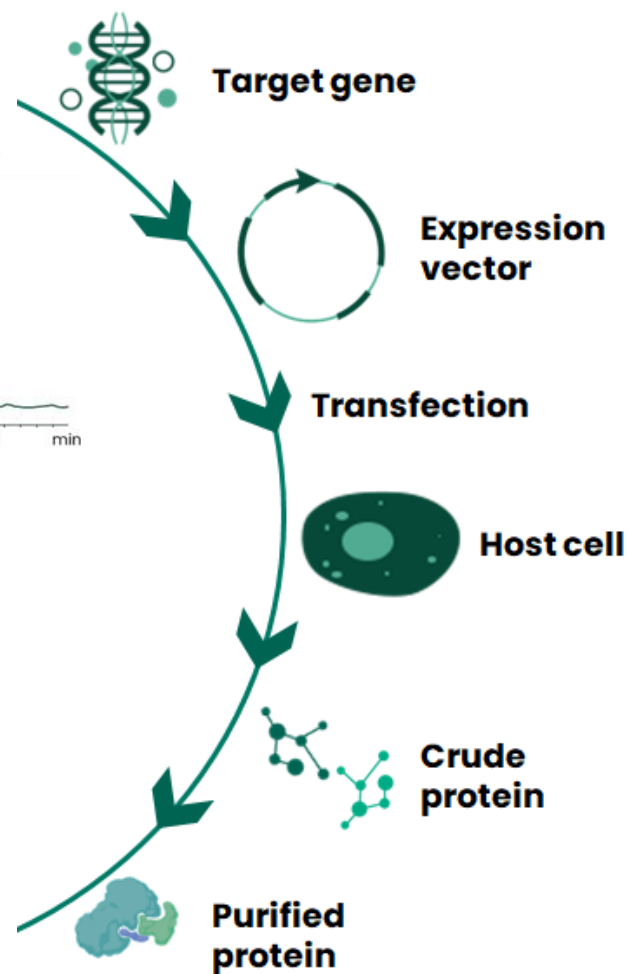
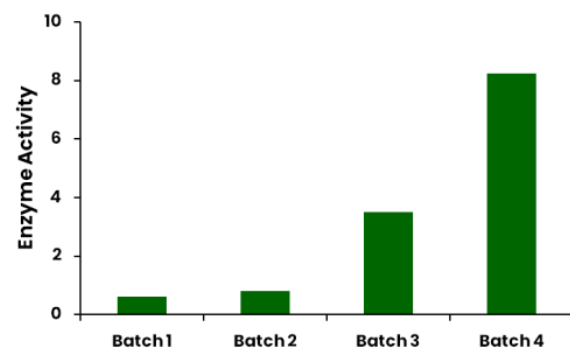
Aggregation



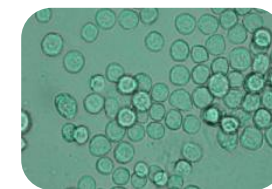
Degradation



Activity Variations



HEK293/CHO

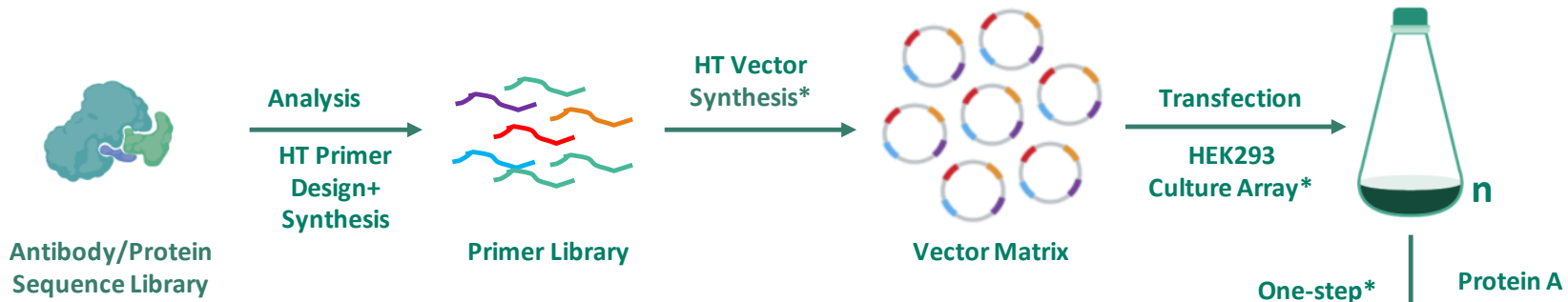


Insect cell



E. coli/Clearcoli

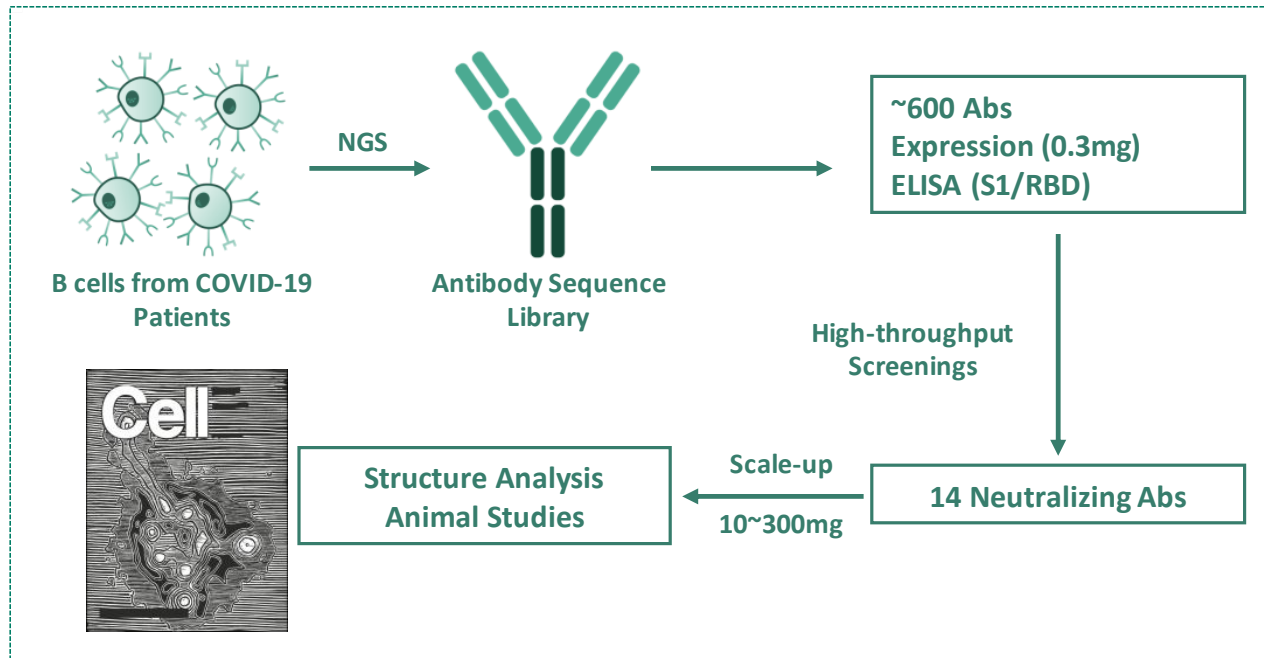
High-throughput Expression Platform (HEK293/CHO)



High-throughput
10,000+ antibodies per month

High-speed
Gene-to-antibody in as fast as 10 days

A wide range of formats
scFv, Fab, VHH, mini-binders, bispecifics, full-length IgG, Fc-fusion, chimeric, and beyond.



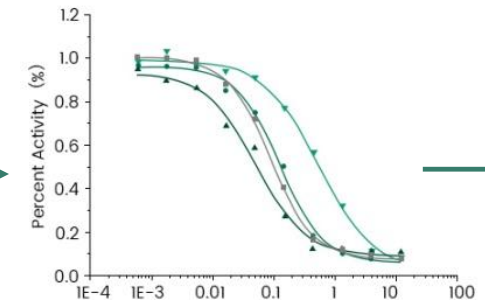
One-step* **Protein A Ni-affinity**



>90% Purity

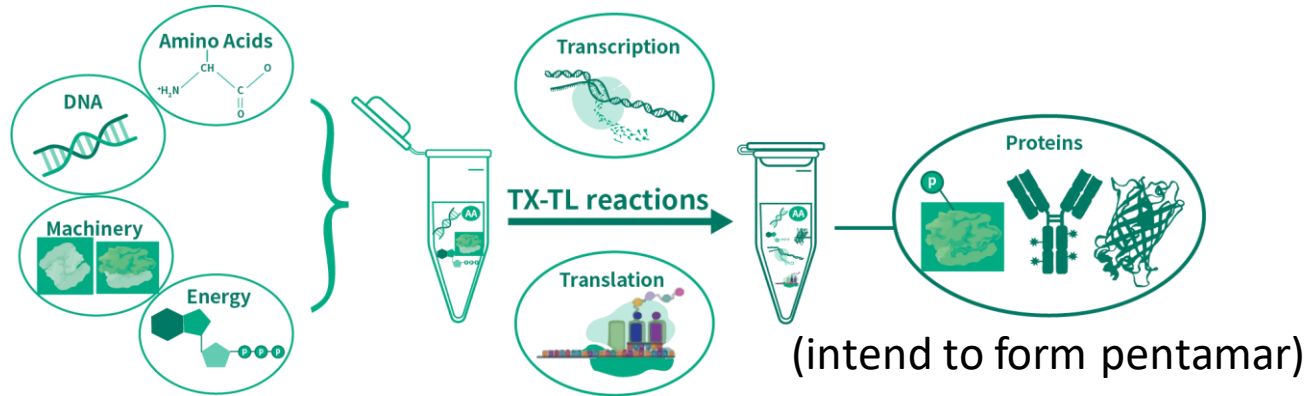
Custom Antibodies/Proteins

Validation



Scale-up

High-throughput Expression Platform (Cell Free Protein Synthesis)



3 hours
to complete antibody expression

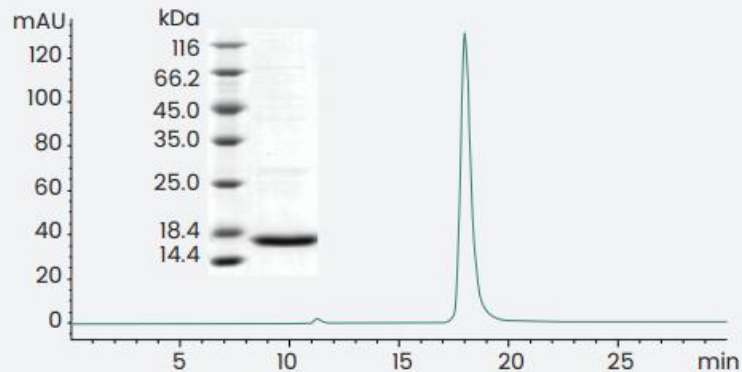
1 day
to obtain purified antibody

Unlocking limitless
scFv-His, bivalent scFv, VHH-His, VHH-Fc,
bivalent VHH, mini-binders, difficult constructs

XPressMAX™
Cell Free Protein Synthesis Kit available

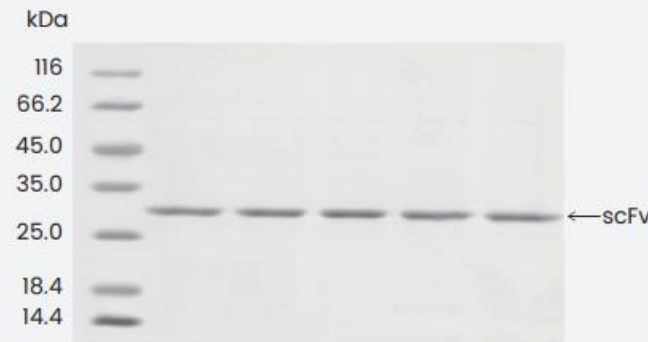
High purity VHH synthesis

VHH synthesized by CFPS with purity by SDS-PAGE and SEC-HPLC >95%.



High-throughput scFv synthesis

From gene to purified 50 scFvs, Sino Biological completed synthesis by CFPS in only 5 days.



High-Throughput Platform for Antibody Production & Developability Assays

HTP Antibody Production

Comprehensive Format Support: IgG, scFv-His, VHH-Fc, VHH-His, mini-binders, among others



Developability Assay

"20+ ready-to-go physicochemical assays offering robust, cost-effective assessments"

Mammalian Transient Expression Platform



As fast as 10 days

- High-throughput recombinant antibody production (>10,000 Ab/month) in 293/CHO cells
- From gene to purified antibody **as fast as 10 days**

Cell-Free Protein Expression Platform



As fast as 5 days

- Recombinant antibody expression in hours & Antibody purification in 1 day!
- Supporting AI-driven protein design and antibody screening

SEC-HPLC

(Purity)

Intact MS

(LC-MS)

ELISA/SPR/BLI

(Target Binding)

SEC-MALS

(Aggregation)

nanoDSF/DSC

(Thermostability)

HIC-HPLC/PAIA-HIC

(Hydrophobicity)

BVP/DNA/Insulin ELISA

(Poly-reactivity)

AC-SINS

(Self-Association)

[View All Antibody Developability Assays >>](#)

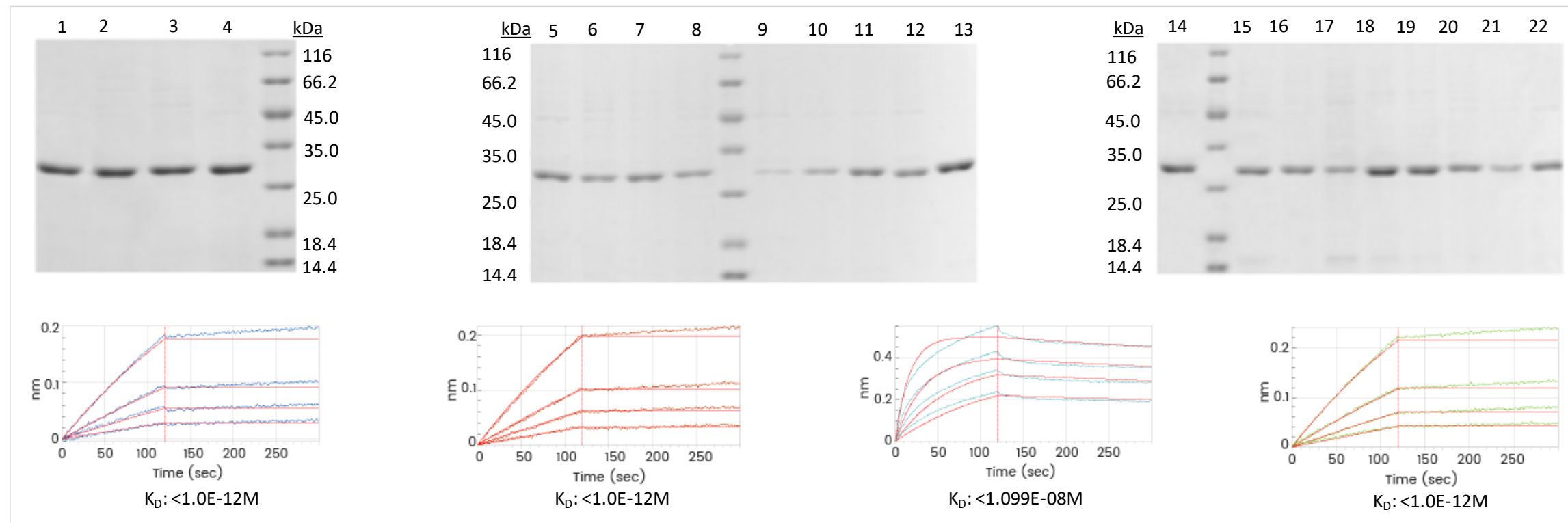
HTP scFv-His/VHH-His Synthesis for Screening

Format: 2000+ scFv-His and VHH-His antibodies

Expression system: CFPS

Target: Finished expression and affinity analysis with different target proteins by BLI

Timeline: 3-4 weeks



Antibody Development Service

- Mouse/Rabbit mAb
- Rabbit pAb
- Antibody pair
- Nanobody

- **Anti-idiotypic Antibody**
- PTMs-specific Antibody
- Neutralizing Antibody
- Therapeutic Antibody

Antibody Development & production

- Hybridoma Mouse Mab Technology
- Phage Display Rabbit Mab Technology
- Single B Cell Antibody Technology (Beacon/FACS based)

Optimized Immunization

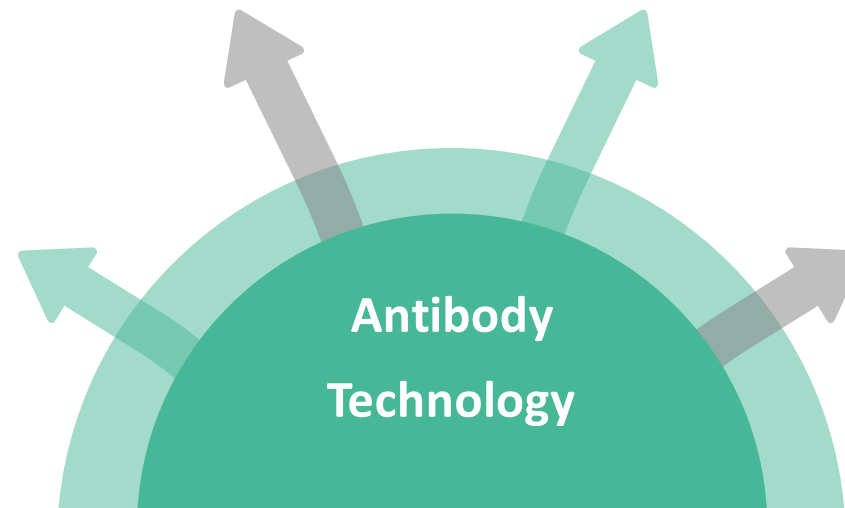
- Protein or peptide Immunization
- DNA Immunization
- Whole Cell Immunization
- mRNA immunization

Screening and Evaluation

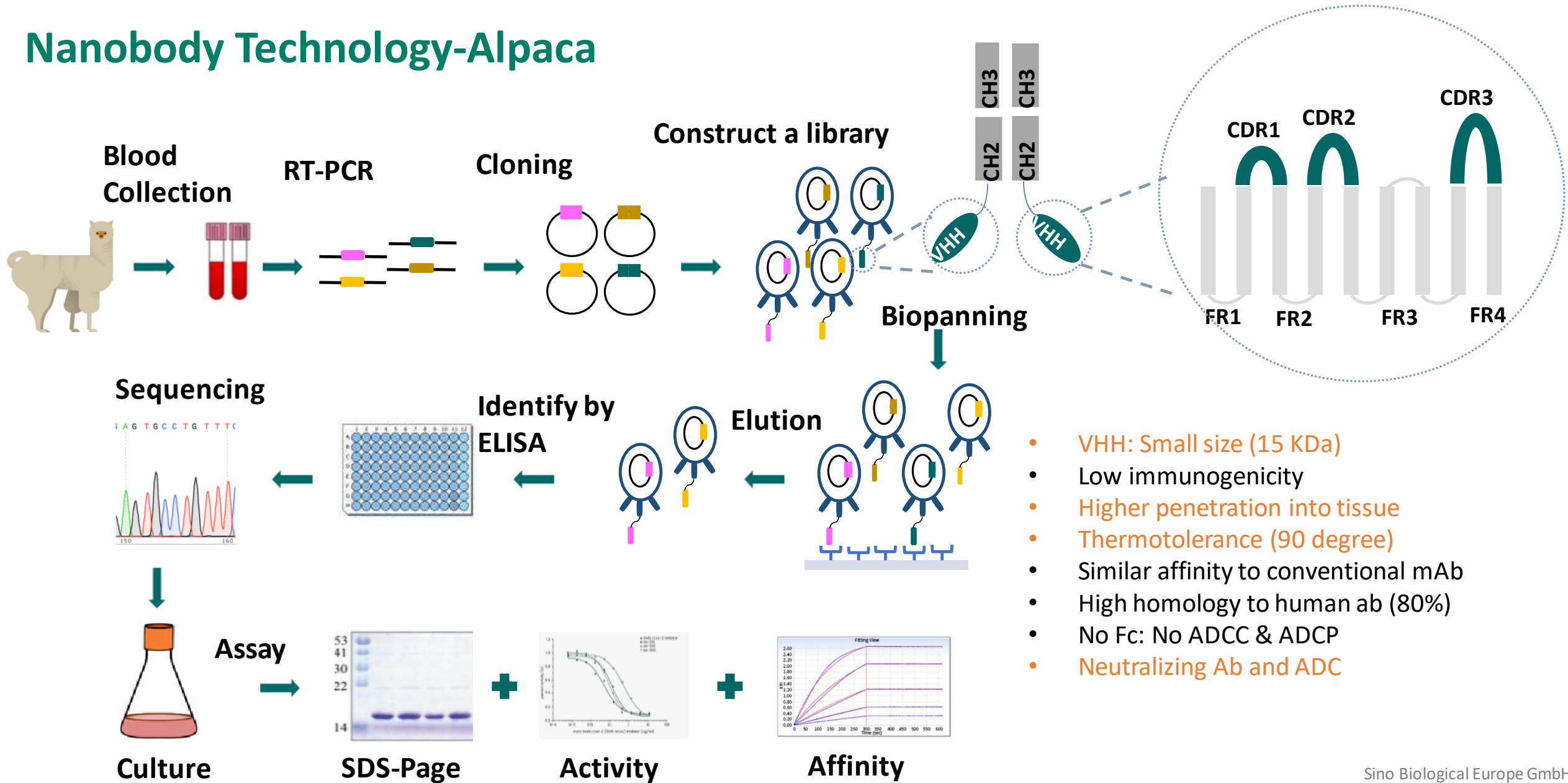
- Immunoassays: Elisa, FACS, WB, IHC, IF, IP
- Biochemical & Biophysical: BLI, SPR, SEC
- In vitro & In vivo bioactivity Assays

Antibody Engineering

- Antibody DNA Sequencing
- Antibody Humanization
- AI-mediated antibody affinity maturation



Nanobody Technology-Alpaca



Highlights of Sino Biological's CRO service

- ✓ *One-stop* CRO service provider
- ✓ *Thousands of proteins* researched in-house and our researchers have *15+ years* of experience
- ✓ Our facilities can handle *large-scale* production, ~1500L
- ✓ We offer trouble-shooting with our CRO service package
- ✓ Exclusive team for your project with monthly updates
- ✓ Competitive price & fast turnaround time



THANK YOU

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