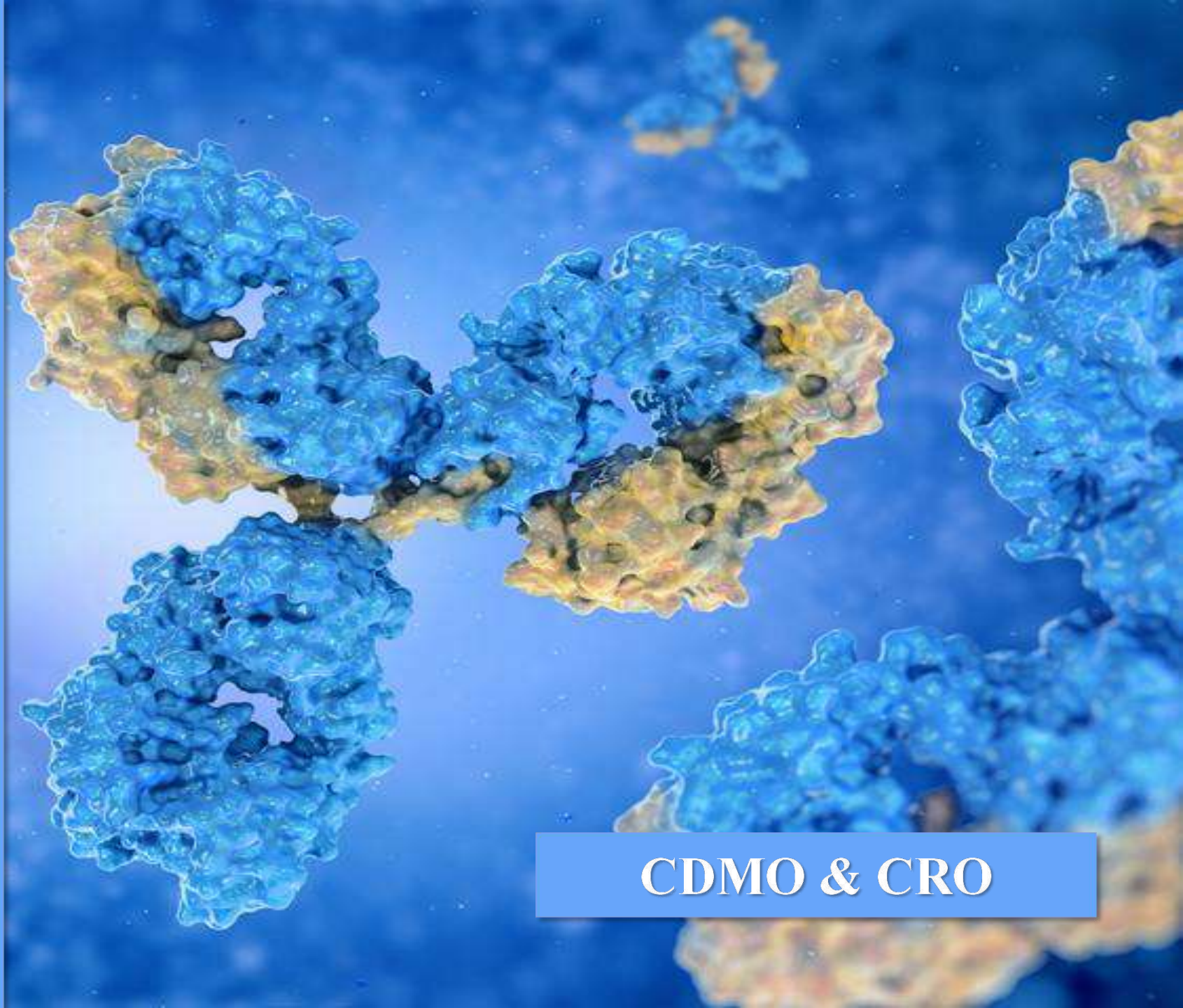




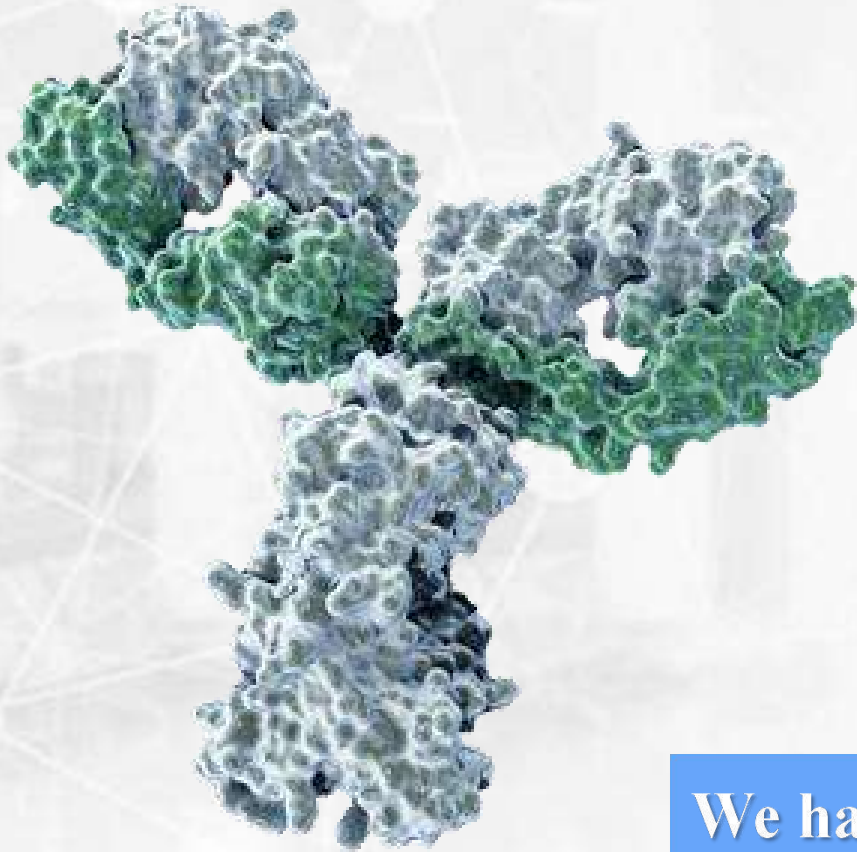
Diaorigin Biotechnology

Recombinant Antibody Expert



CDMO & CRO

Recombinant antibody



- * **Stability**

Superior Lot-to-Lot Consistency

- * **Scalability**

Amenable to large-scale production

- * **Engineerable**

Knowing sequence for all engineering

- * **Animal-free**

In vitro production without animal

We have re-constructed more than 500 recombinant antibodies, 99% of them are similar or better than original hybridoma antibodies.

Diaorigin Biotechnology

One-step Recombinant Antibody Solution



Diaorigin is committed to providing IVD companies and research institutes with the design, development and preparation of antigen and antibody raw materials. The company has innovative platforms and technologies for molecular cloning, cell line development, protein purification and industrial production of antigens & antibodies. Diaorigin's patented SwiMR technology is the most efficient screening tool for rapid cell line development using FACs sorting; The innovative DiaBooster platform allows to expand the highest expression up to 10-15 g/L; The antibody/antigen production platform offers very competitive pricing for small, medium and large-scale production and purification; The high-standard Interference Eliminating Proteins (IEPs) offer half of current market price.

High quality, Competitive pricing and Time saving is our promise to our customers.

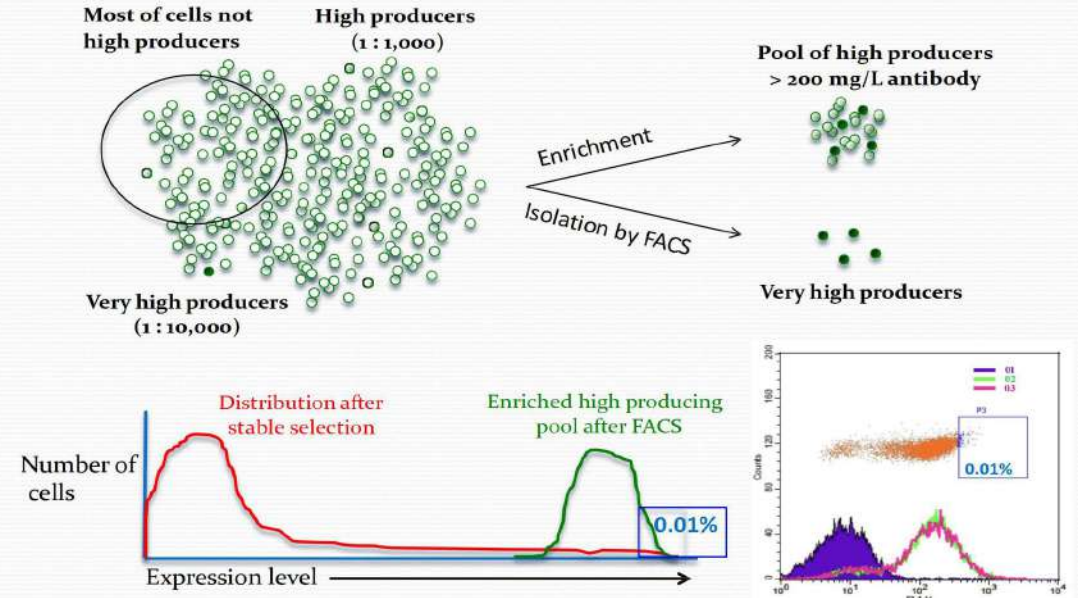
SwiMR

(Switchable Membrane Reporter)

- Our patented technology -

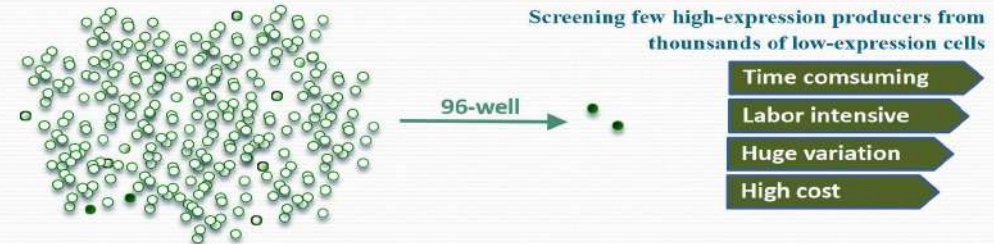
Applied in antibody drug industry for more than 10 years, our patented SwiMR technology allows rapid stable cell line development. Our construction makes reporter gene and target gene expressing separately and equivalently. We sort by FACS the 0.01% top expression cells right after transfection and enrichment, which can be used directly for industrial scale-production as top mini-pool, stable for at least 100 passages. We screen the monoclonal cell clones from the 0.01% top expression cell pool, which reduces greatly the screening time and augments remarkably the probability to obtain the highest expression cell clones. The reporter gene can be removed (switchable) from the cell genome, making cells express only the target gene. This technology can be applied to any cell lines without restrictions.

SwiMR: Isolation of Rare High Producers



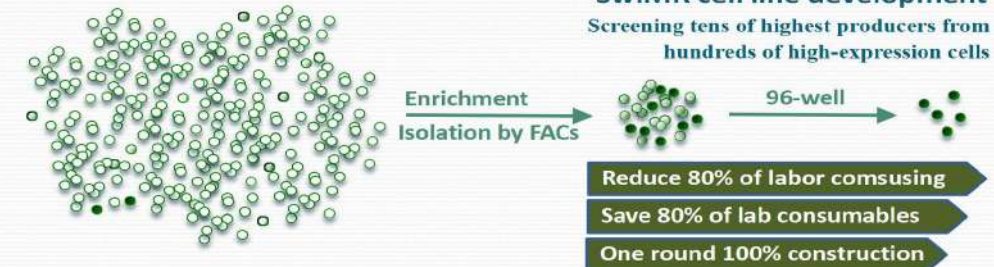
Conventional cell line development

Screening few high-expression producers from thousands of low-expression cells



SwiMR cell line development

Screening tens of highest producers from hundreds of high-expression cells

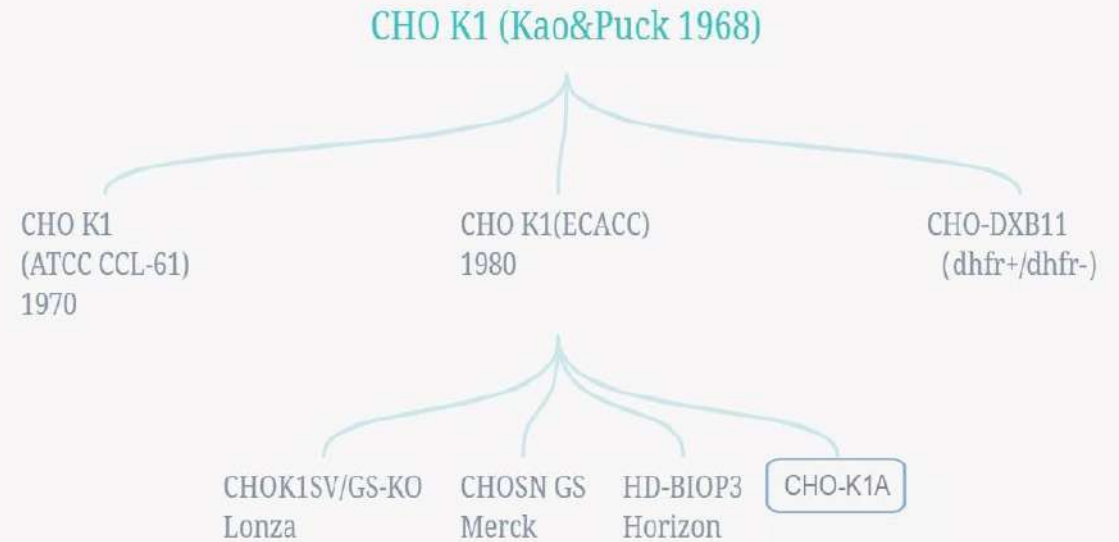


DiaBooster high productive platform

- Our innovative platform -

Expand the highest expression up to 15 g/L

DiaBooster CHO-K1A cell line is an adapted suspension cell line derived from CHO-K1, characterized by its ability to produce complex proteins similar to those in humans and its high tolerance for variations in pH, oxygen levels, temperature or cell density. It is capable to expand expression to 10-20 folds after Fed-Batch culture, which makes it ideal for large-scale manufacturing. Diaorigin integrated the high-performance SwiMR construction to this cell line, allows fast screening of highest expression cell clones. In our system, we are capable to obtain cell clones with recombinant antibody expression level up to 10 - 15 g/L after Fed-Batch culture. The whole process takes only about 4 months.



DiaBooster Expression Platform

SwiMR vector construction

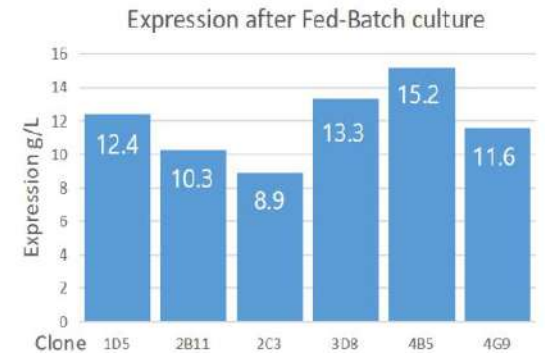
Transfection of CHO-K1A

0.01% top expression sorting

Monoclonal clone screening

Top 12 clones culture

Top 6 clones Fed-batch



SwiMR /CHO-K1A expression system is able to obtain cell clones with expression level up to 15 g/L after Fed-Batch culture

One-step

Recombinant Antibody Re-construction

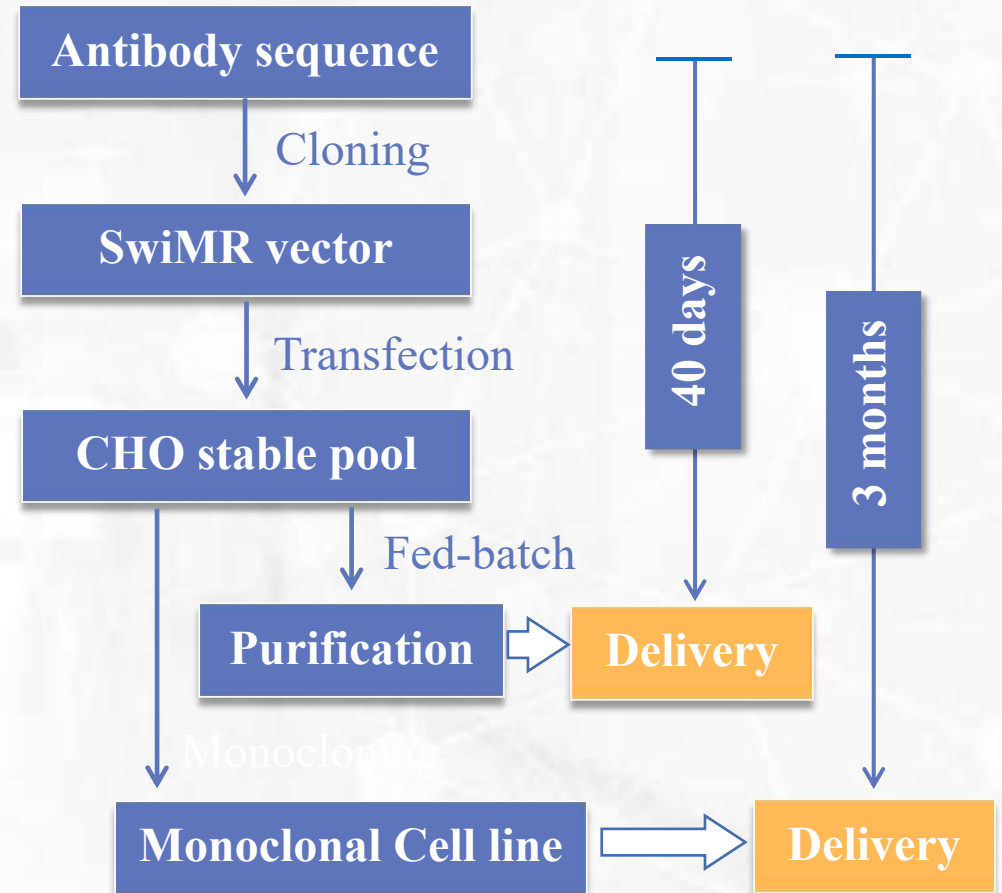
- We take care of everything -

You have hybridoma ? We sequencing

You have only antibody ? We sequencing

You have antibody sequence ? We optimize

We deliver your high quality recombinant antibody in 40 days from antibody sequence



One-step Recombinant Antibody Discovery

- From concept to final products -

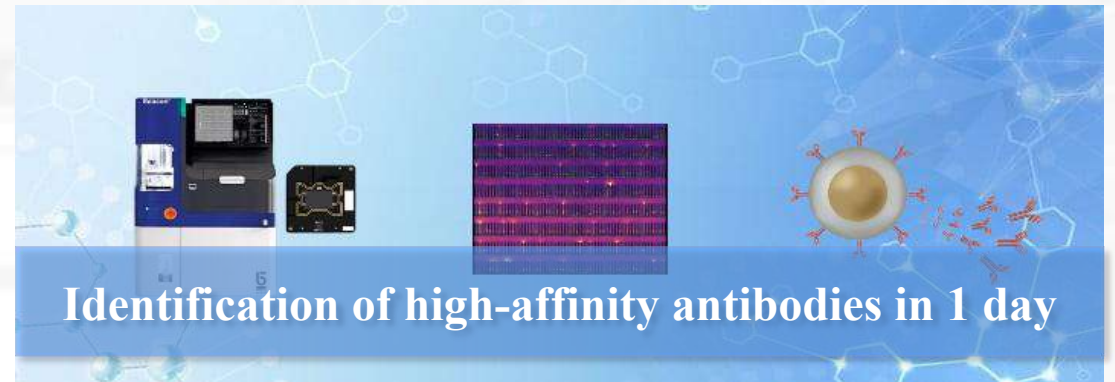
We use Beacon® single B cell sorting technology to screening your high-affinity antibodies.

From your target of interest, we synthesize the gene, prepare the antigen, immunize the mice, screen the B lymphocytes expressing high affinity antibodies, develop the high expression cell line and purify your recombinant antibodies.

Only 2 months, from your concept to high affinity recombinant antibodies !



From sequence to antigen to immunization



Identification of high-affinity antibodies in 1 day



Rapid cell line and recombinant Ab development

Our solutions

Transient solution

- Transient expression
- CHO or HEK cells
- Delivery quantity up to 1 g
- Economical lowest price

Mini-Pool solution

- Stable for > 100 passages
- Delivery in 1 month
- Average expression 500 mg/L
- 13 800 € all included

Monoclonal solution

- Stable monoclonal cell line
- Delivery in 3 months
- Average expression 1 g/L
- 19 800 € all included

Highest solution

- Stable CHO-K1A cell line
- Delivery in 4 months
- Expression up to 15 g/L
- Most competitive price

Our services

Hybridoma conversion

Low expression & instability of hybridoma is commonly known. We convert hybridoma expression to high-expression CHO or HEK cells in ONE month.

Antibody re-expression

You have only your antibody or antigen without cells ? We sequencing your antibody or antigen and re-construct in high-expression CHO cells in TWO months.

Antibody engineering

IgG to IgM or other isotypes conversion; Mouse to goat or any other species conversion; Conversion to bispecific antibody and nanobody; Ab humanization.

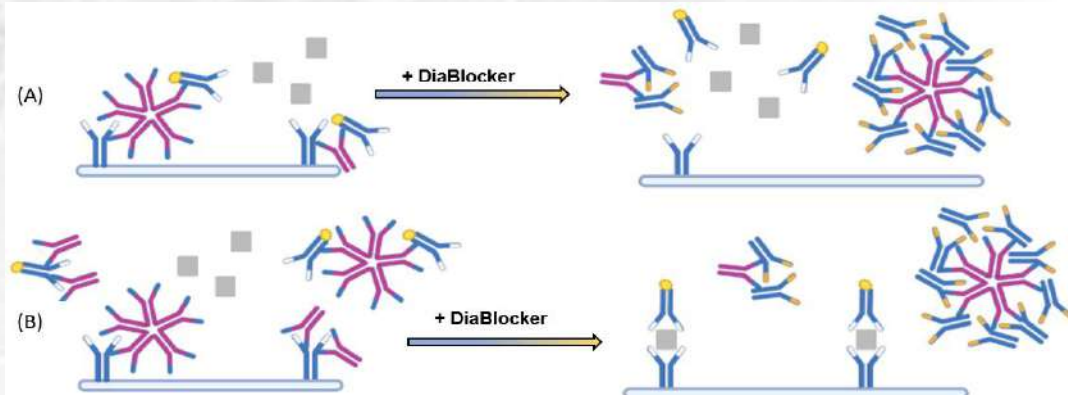
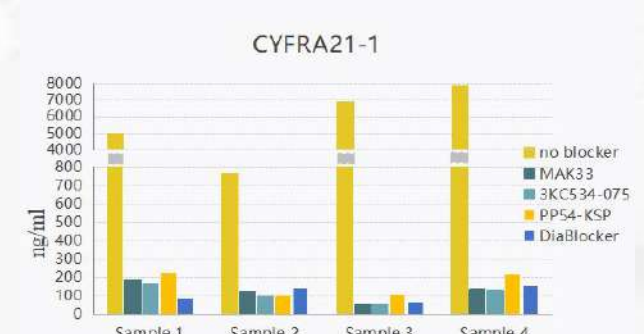
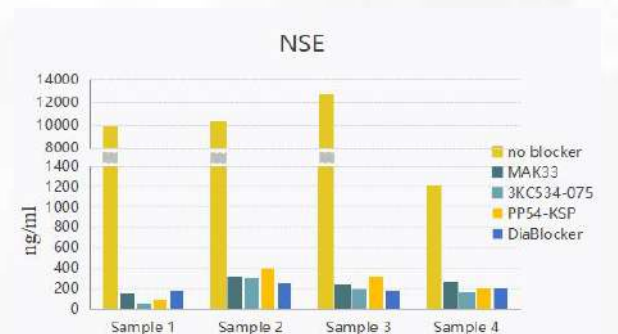
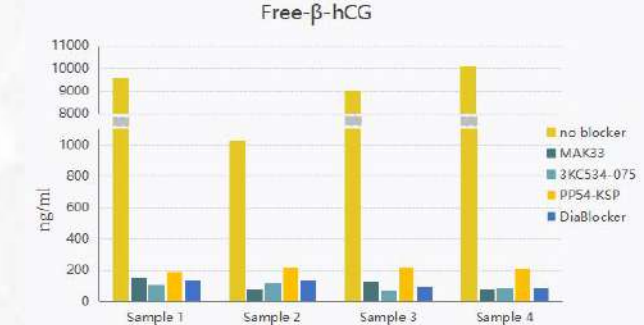
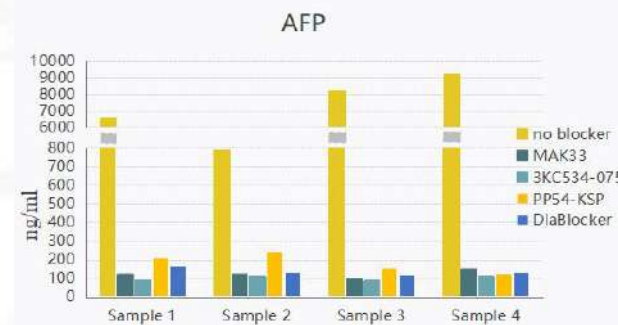
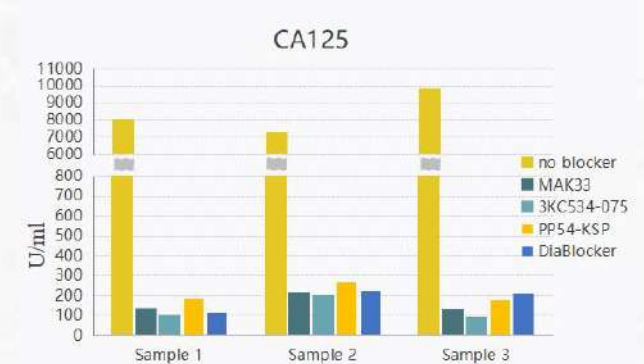
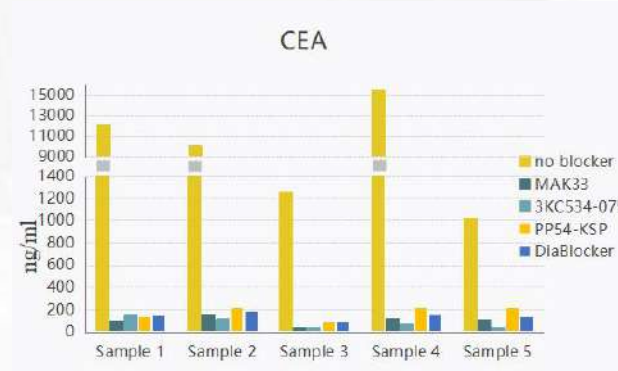
Custom production

We provide small, medium and large scale antigen and antibody production services. Our full service expression and purification at most competitive pricing.

DiaBlocker - Diaorigin Inteferece Eliminating Proteins (IEPs)

Interference-Eliminating Proteins (IEPs) are important in immunoassay development as they restrict the false results for up to 30-40% of test samples, due to heterophilic antibodies (Human Anti-Animal Antibodies or rheumatoid factor). Heterophilic antibodies occur in about 10% clinical samples, resulting either false positive results by combining the capture and detector antibodies, or false negative results by blocking these antibodies.

DiaBlocker® is a proved-reagent efficiently blocking interferences of human anti-mouse antibodies (HAMAs) and Rheumatoid Factor (RF). Laboratory studies demonstrated that DiaBlocker® has similar interference-eliminating efficiency as most commercial IEPs.





Diaorigin Biotechnology

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