

We specialize in antibody production and discovery - dedicating ourselves to advancing human health and promoting sustainability with more than 10 years of experience. We offer premium solutions at competitive rates, all anchored in our commitment to a brighter and healthier future.

- Founded in 2012 in Taizhou, China
- Global sublicensing rights for ECACC's CHO-K1
- One-stop solution for antibody development
- ISO-9001:2015 certificate



CONTACT US

www.biointron.com

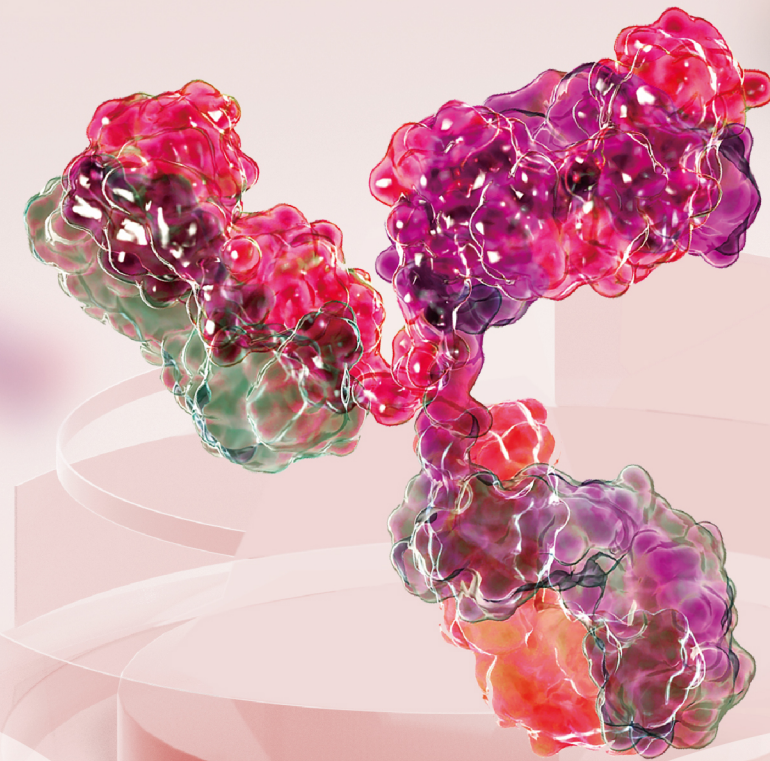
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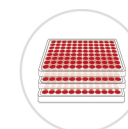
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ACCELERATING YOUR ANTIBODY DISCOVERY



HTP Recombinant Antibody Production



Bispecific Antibody (BsAb) Production



Large Scale Antibody Production



VHH Antibody Discovery



Single B Cell Screening



Affinity Maturation & Antibody Humanization



Hybridoma Sequencing



Afucosylated Antibody Expression



Stable Cell Line Generation



In Vivo Proteins and Antibodies

COMPANY PROFILE

ABOUT BIOINTRON



Cost-Effective

Custom Antibodies
Top Quality
Competitive Prices



Time-Saving

Automated Systems Deliver Fast
& Precise Results



High-Quality Control

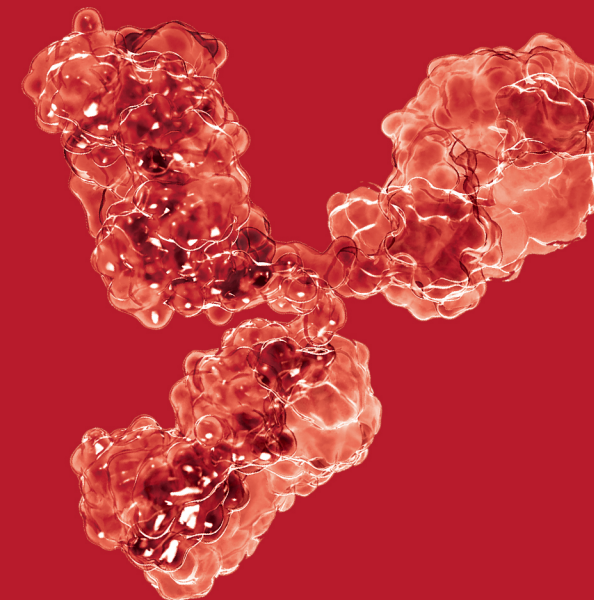
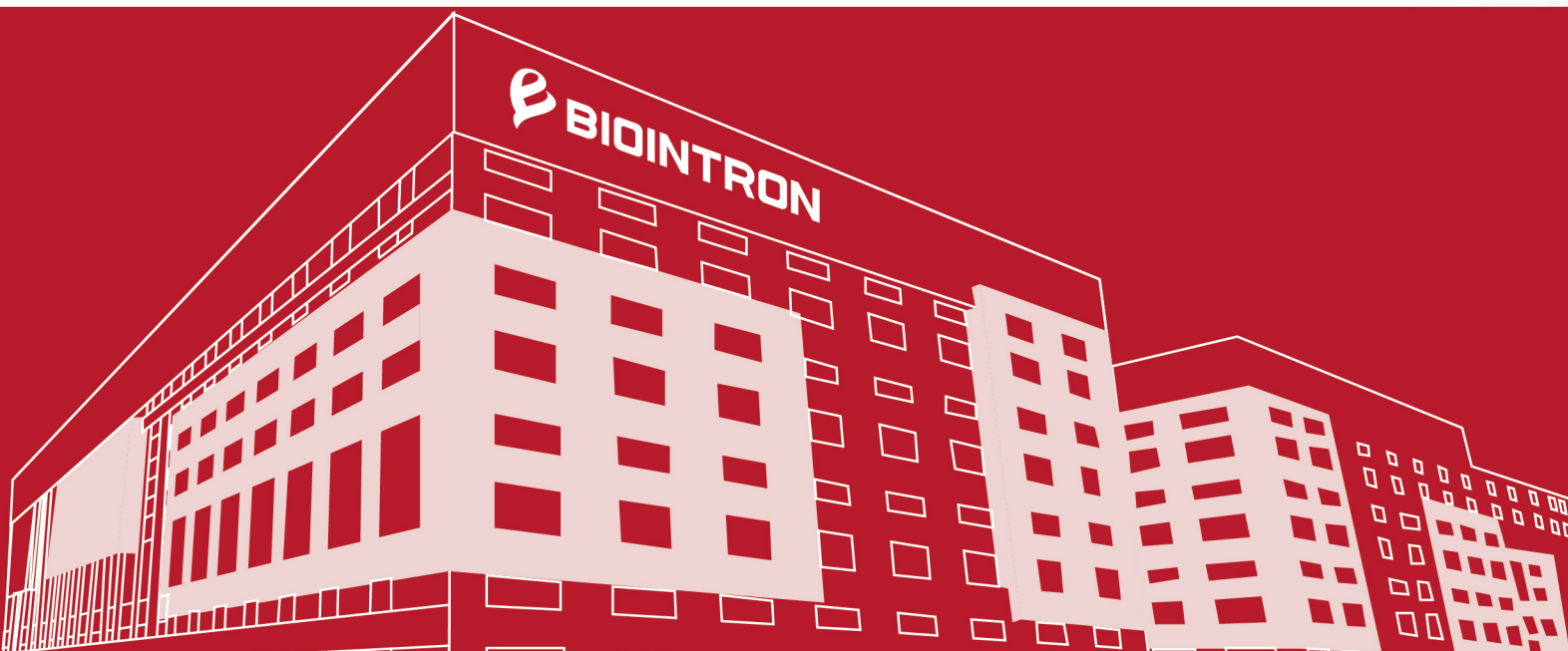
Strict Standards Ensure
Top-Notch Antibodies

Founded in 2012 and certified to ISO 9001:2015, Biointron is a CRO specializing in antibody discovery, optimization, and expression services for global biotech and pharmaceutical companies. Biointron holds a leading position in the antibody expression industry. From gene sequence to purified antibodies, it only takes 2 weeks. We have delivered tens of thousands of recombinant antibodies for more than 1,500 biotech and pharma companies worldwide.

We provide a one-stop solution for antibody discovery and optimization - including VHH antibody discovery, single B-cell antibody screening, hybridoma sequencing, antibody humanization, antibody affinity maturation, and more.

Additionally, Biointron holds global sublicensing rights for ECACC's CHO-K1. Our CHOK1BN cell line, which is derived from CHOK1, has been filed in the DMF system with the US FDA. By choosing the CHOK1BN cell line, several partners' projects have entered the multicenter international clinical trials successfully.

For more information, please visit our official website www.biointron.com, or contact info@biointron.com



12+

Years of Experience

1,500+

Companies Served Globally

80,000+

Antibodies Delivered Annually

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ACCELERATING YOUR ANTIBODY DISCOVERY

A

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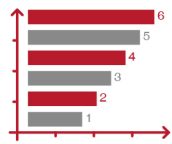
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HTP RECOMBINANT ANTIBODY PRODUCTION

Biointron's high-throughput antibody production provides the most cost-effective option for recombinant antibodies, where you may choose to deliver either supernatant or purified antibodies (ug to gram level). From gene synthesis to purified antibodies (IgG, scFv, VHH, etc.), it takes as fast as 2 weeks. Any isotype, format, or antibody fragment can be expressed with no amount limitations.

FEATURES



High Throughput

1000+ mAb/batch



2 Weeks

As fast as 2 weeks for production, including gene synthesis



Expertise

12+ years of experience on antibody production

QC Standards: SDS-PAGE >95%, Endotoxin <1 EU/mg, SEC-HPLC Detection

WORKFLOW

Sequence Design and Synthesis

Plasmid Construction and Preparation

Transient Expression



Delivery



Stringent Quality Control



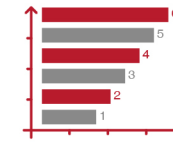
Affinity Purification

BISPECIFIC ANTIBODY (BSAb) PRODUCTION

Bispecific antibodies represent a key component of the next-generation of antibody therapy. Bispecific antibodies can target more than two different antigens at the same time. For instance, they can simultaneously bind tumor cell receptors while recruiting cytotoxic immune cells.

Biointron has expressed thousands of bispecific antibodies, and we have extensive experience in bispecific antibody production. Any format can be expressed.

FEATURES



High Throughput

500+ molecules/batch



Customized Service

Any format can be produced

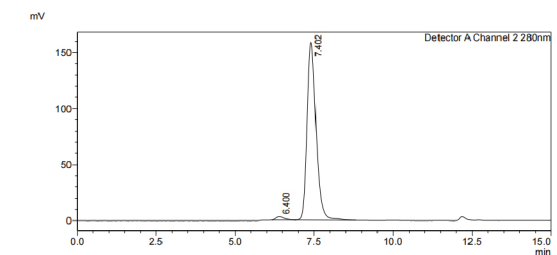
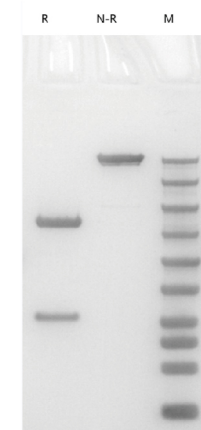


Fast Turnaround Time

As fast as 3 weeks

CASE STUDY

IgG-scFv



DetectorA Channel 2 280nm

Peak#	Ret. Time	Area	Height	Conc.
1	6.400	55403	3012	1.761
2	7.402	3091146	158654	98.239
Total		3146550	161666	

Lane R: Reducing, Lane N-R: Non-Reducing, Lane M: Protein Marker

LARGE SCALE PRODUCTION

Producing therapeutic antibodies or proteins in large quantities is required for many applications, including in vitro studies, in vivo animal studies, and pre-clinical trials. Biointron's large-scale Producing services offers scaled-up production of recombinant antibodies/proteins from hundreds of milligrams to gram levels within weeks.

FEATURES



Consistency

All products come from one batch, SDS-PAGE >95%, SEC-HPLC >95%, endotoxin level <0.1 EU/mg



Fast Turnaround Time

As fast as 4 weeks for gram-level production

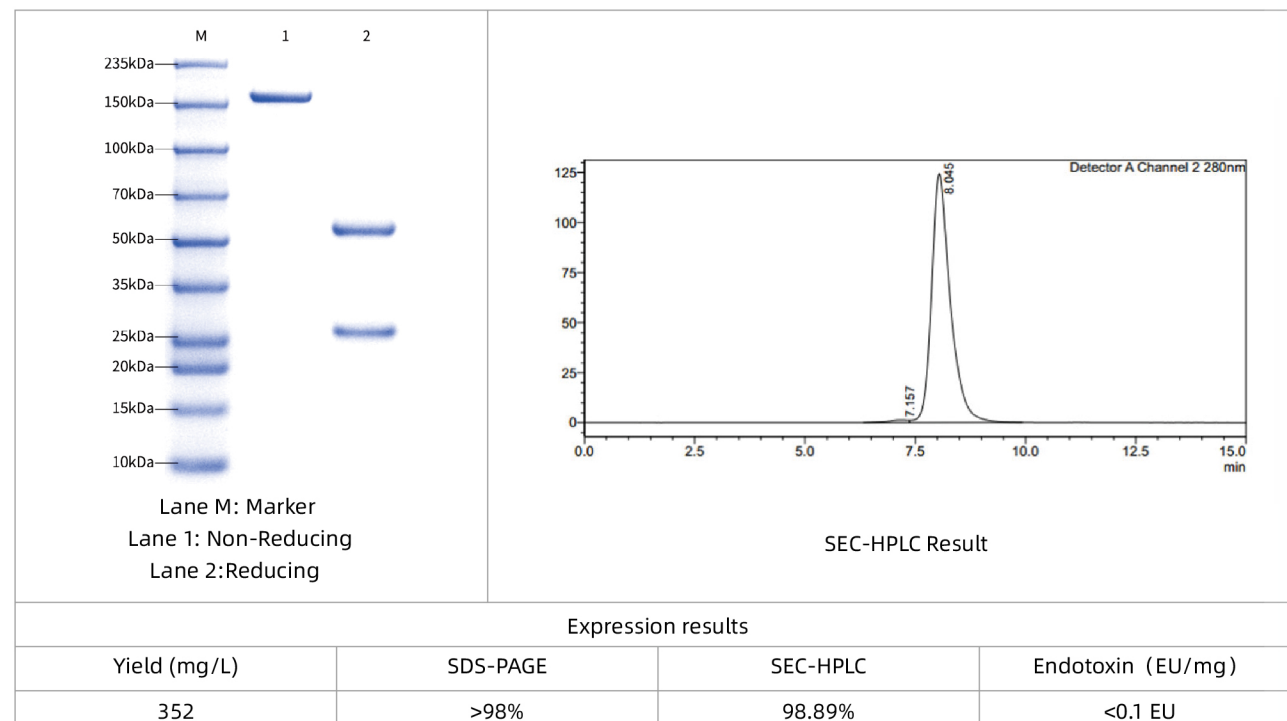


High Capacity

Up to the hundred-gram

CASE STUDY

1000 mg recombinant mAb production in CHO cells



VHH ANTIBODY DISCOVERY

SdAb or VHH is a promising next-generation therapeutic antibody technology for cancer immunotherapy and other applications.

Biointron is a well-recognized leader in the field of single domain antibody discovery. Based on our advanced phage display technology and high-throughput antibody expression platform, our scientists are specialized in the production and discovery of specific single domain antibodies.

FEATURES



Self-owned Alpaca Breeding Farm

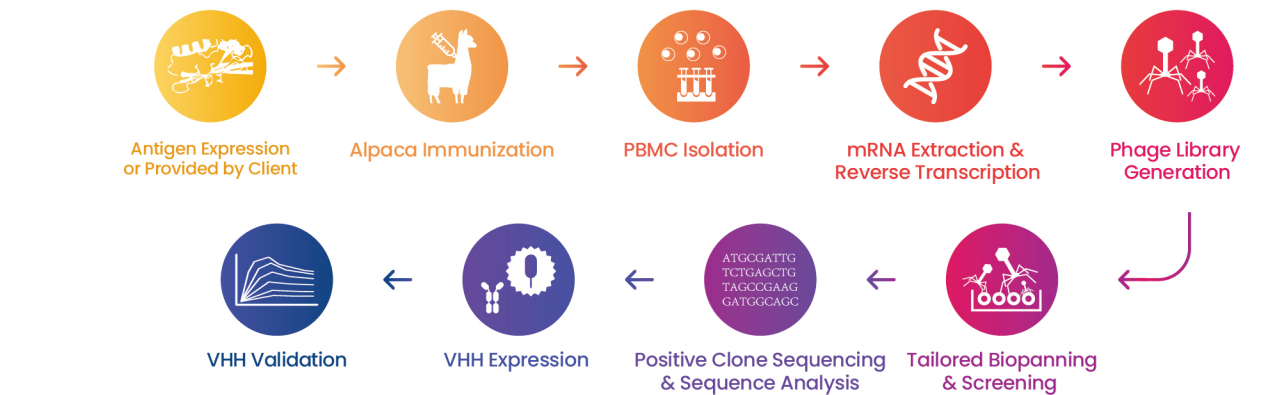


200+ Projects Delivered

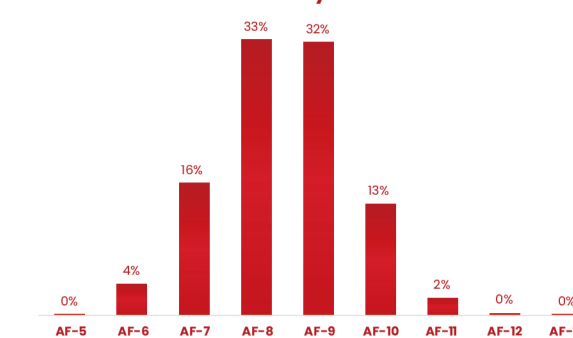


High Diversity & Large Capacity

WORKFLOW



Biointron VHH Affinity distribution*



From our platform, VHH antibody hits with affinity ranges from 10⁻⁶ to 10⁻¹¹ M have been generated, with most falling within 10⁻⁸ and 10⁻⁹ M. It should be noted that the presented data represents only a portion of projects from one client and may have sampling bias. The distribution of hits with different affinity may not reflect the variance between different targets. The data is from SPR affinity measurement.

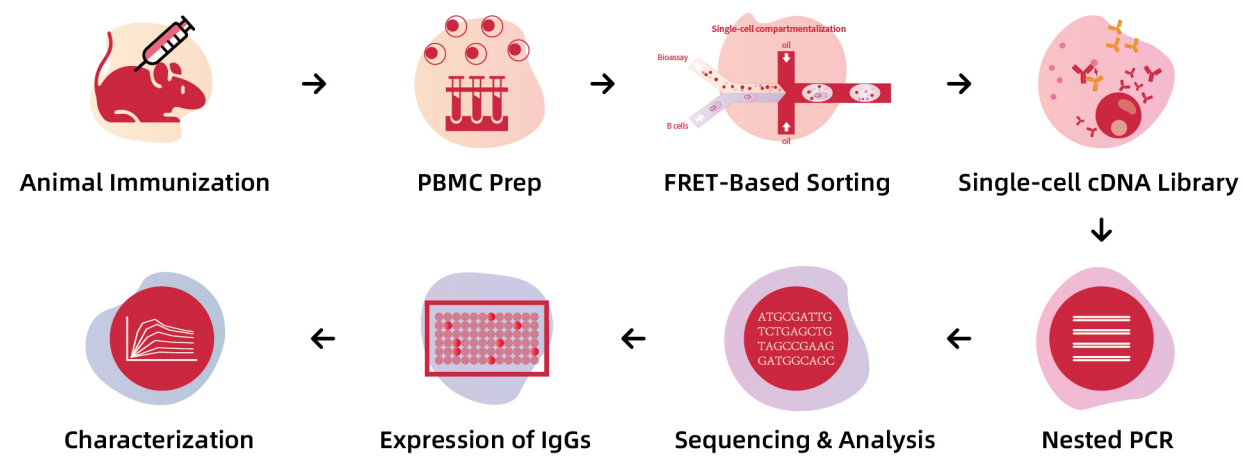
SINGLE B CELL ANTIBODY DISCOVERY

Biointron offers a high-throughput, fully integrated platform for accelerating antibody discovery. Biointron's high-throughput single B cell screening platform can screen 2×10^6 plasma B-cells from immunized animals. Antigen specific antibody-secreting cells can be isolated. It allows the detection of potentially rare antibodies or drugs with unique properties.

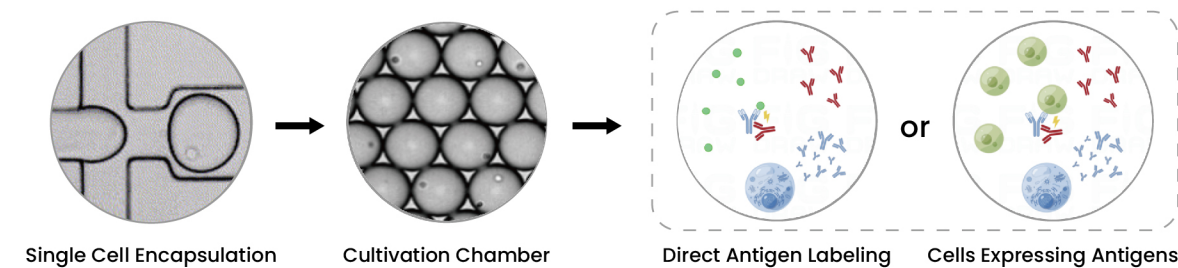
FEATURES



WORKFLOW

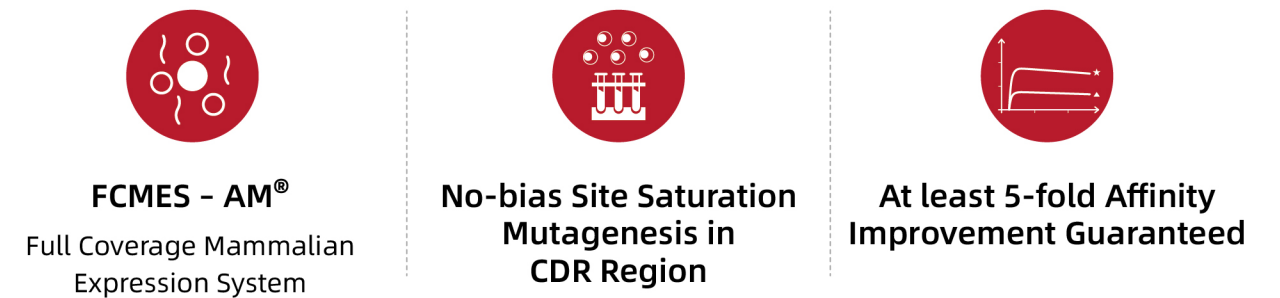


SINGLE B CELL SCREENING PROCESS



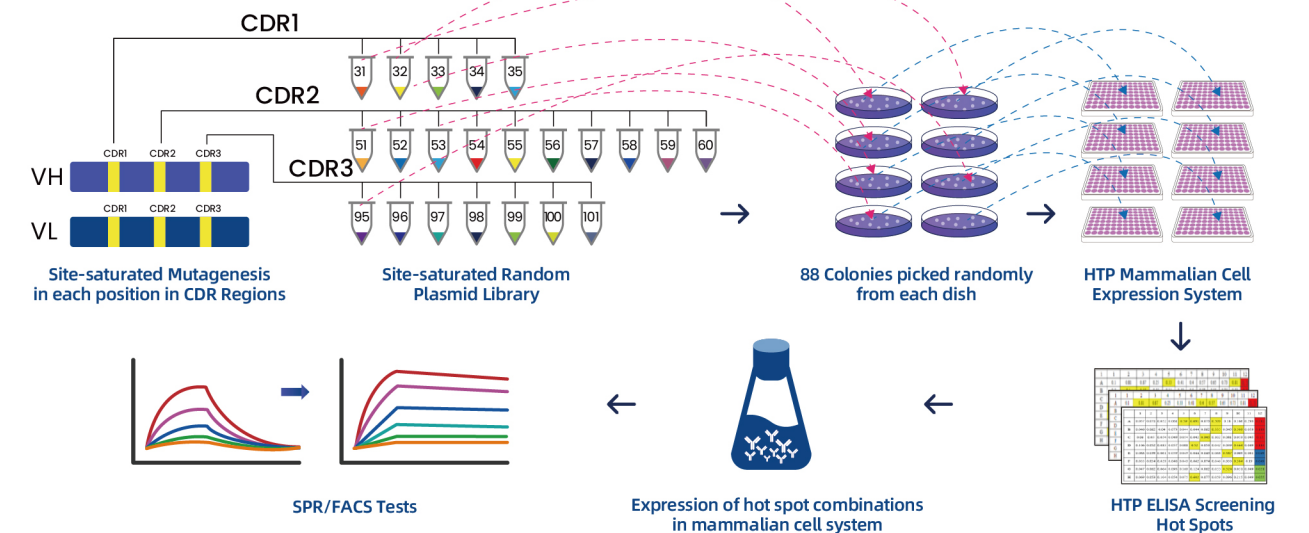
AFFINITY MATURATION

FEATURES



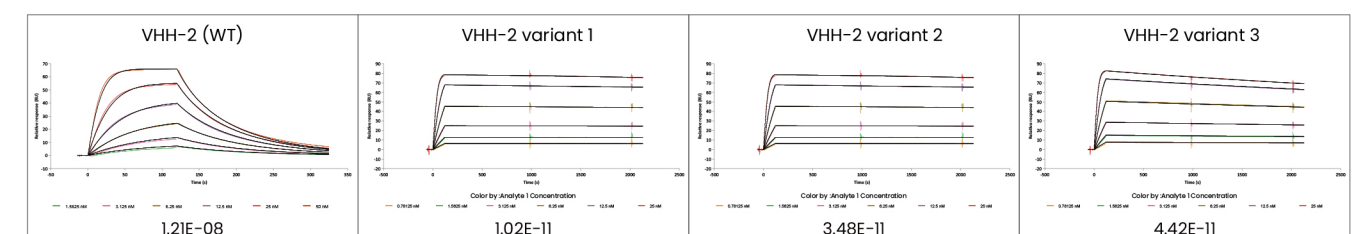
FCMES - AM[®] (Full Coverage Mammalian Expression System) is Biointron's proprietary platform for affinity maturation. Each amino acid in the CDR region will be mutated to the other 18 amino acids (except Cysteine) with equal ratios. The clones will be expressed in a mammalian system and an ELISA binding assay will be conducted as an initial test, followed by SPR or FACS for further affinity measurement.

WORKFLOW



CASE STUDY

The affinity increases 1186-fold, 348-fold and 274-fold separately.



ANTIBODY HUMANIZATION

Recombinant antibody technologies are rapidly becoming available and showing considerable clinical success. However, murine monoclonal antibodies may induce immunogenic responses, potentially limiting their application for humans. Humanized antibodies can overcome these problems and are considered to be a promising alternative therapeutic agent.

Biointron's antibody humanization service is based on CDR grafting and back mutation with PTM analysis.

FEATURES



Affinity Guaranteed
No less than 3 times drop

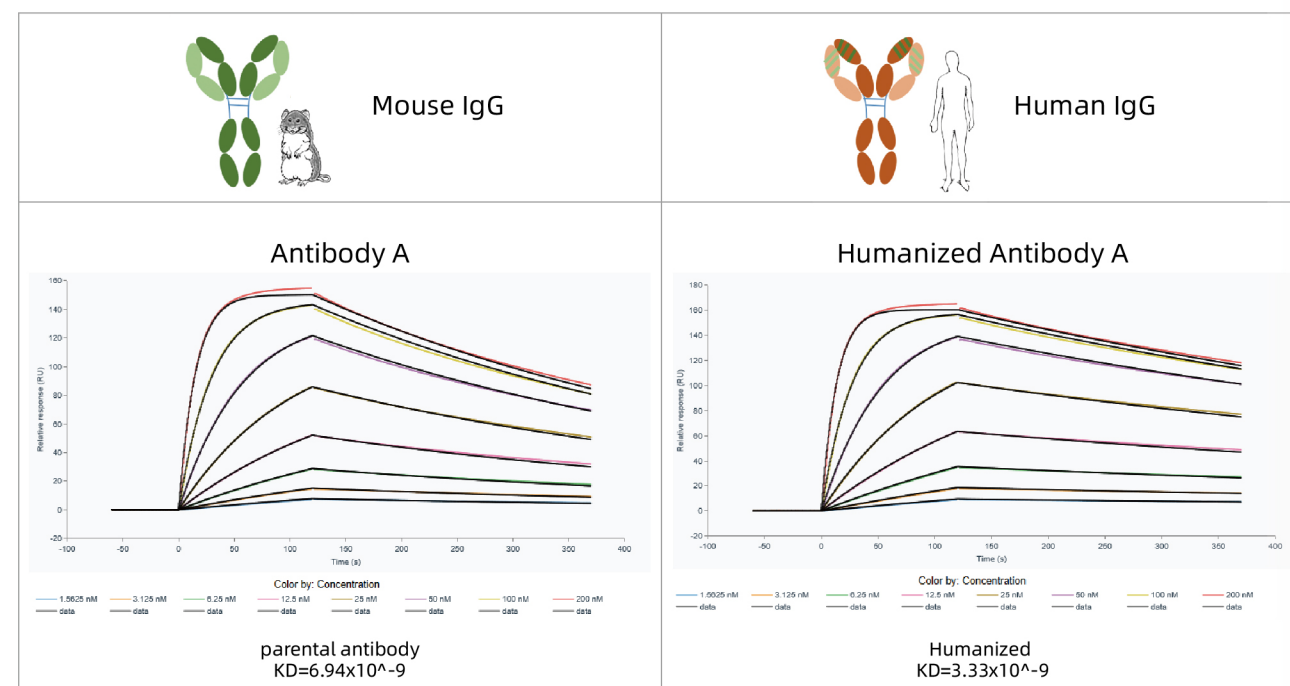


Fast Turnaround Time
As fast as 4 weeks



Expertise
10+ years in humanized antibody design

CASE STUDY



HYBRIDOMA SEQUENCING

The antibody sequence is crucial for patent applications (distinguish your antibody from others), recombinant antibody expression, antibody engineering (humanization & affinity maturation), and more.

Biointron offers a high-quality hybridoma sequencing service, for the sequencing of variable regions of monoclonal antibodies produced from hybridoma cell lines. Once the sequences are confirmed, the recombinant antibody can be expressed and purified in as fast as 2 weeks.

FEATURES



5' RACE
Simple and reliable

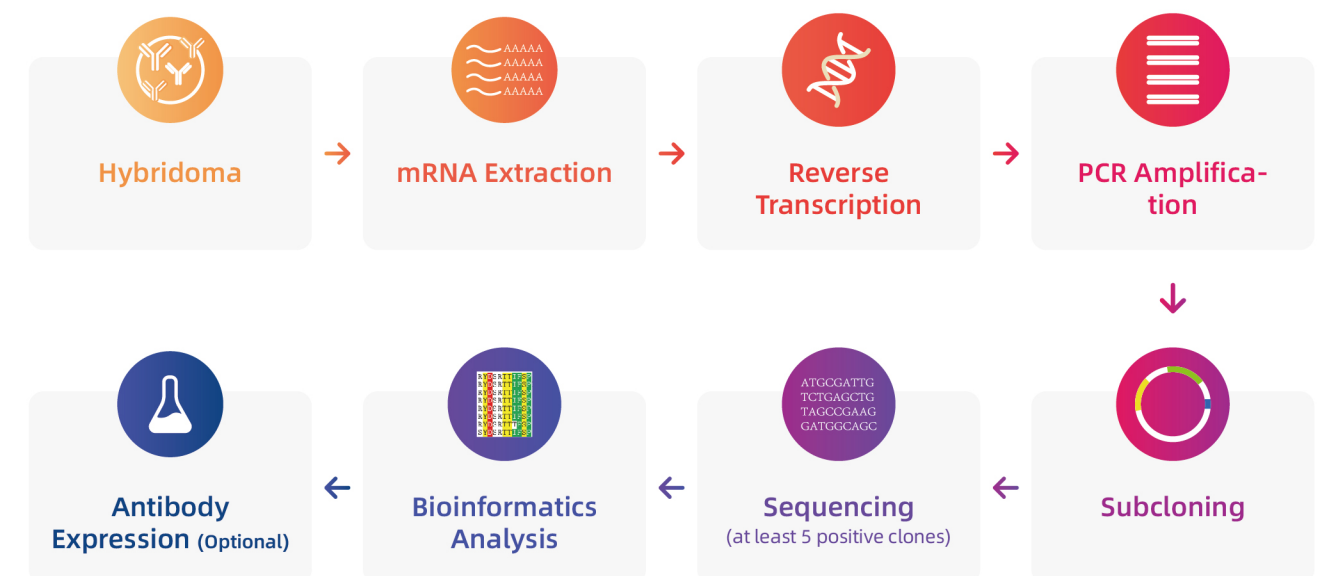


Fast Turnaround Time
1 week



100% Accuracy
Cross-verified with 5 independent clones

WORKFLOW



AFUCOSYLATED ANTIBODY EXPRESSION

Biointron's fucose-free host cell CHOK1BN-Fut8KO can be used for industrial production following antibody characterization and functional verification. Compared to the unmodified CHOK1BN cell line, the antibody produced by the modified cell line not only achieves afucosylation but also maintains consistency in terms of expression quantity and quality.

FEATURES



Fut8 Gene Knock-Out Cell Line

We guarantee the host cell line will have fucose removed



High Yield and Quality

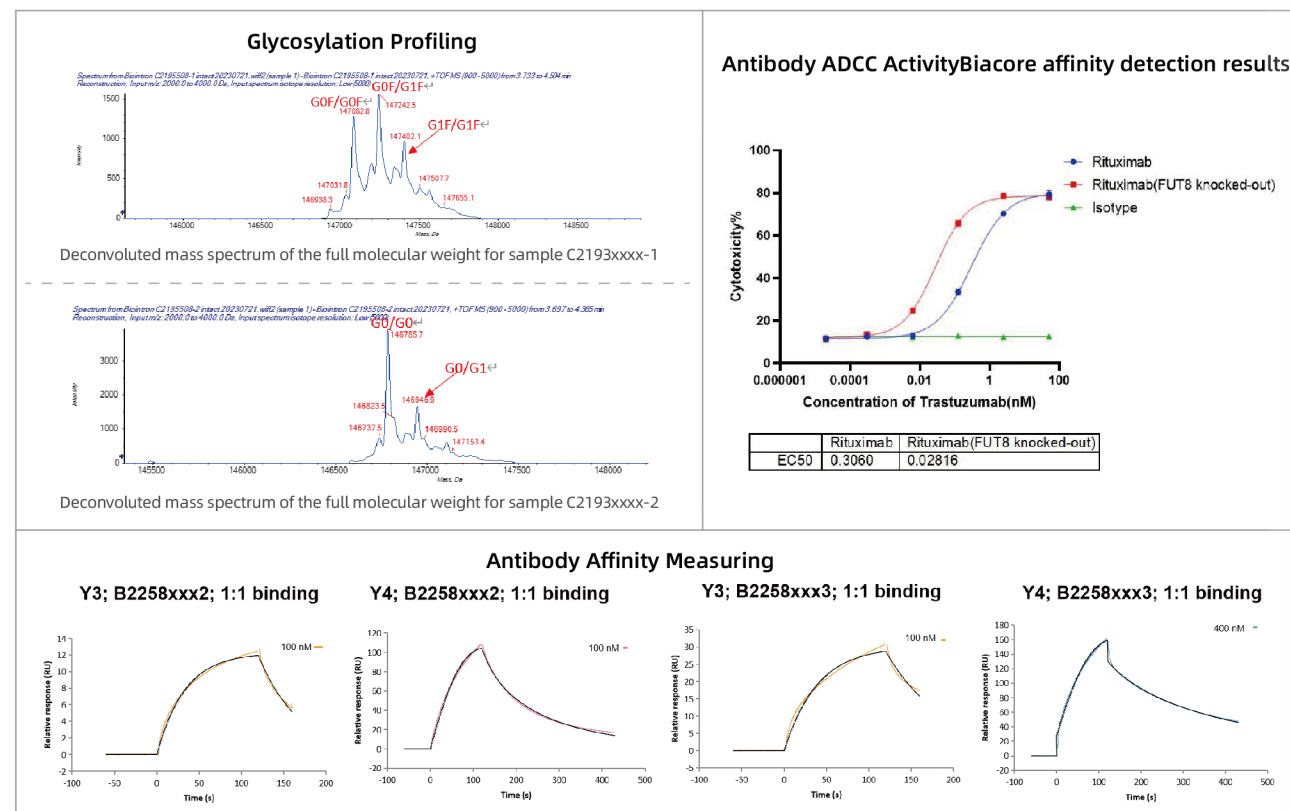
Produce antibodies with high purity and low endotoxin levels



Customized Services

Fast antibody delivery cycle for purified antibodies

CASE STUDY



CHO-K1 STABLE CELL LINE GENERATION

Biointron provides a stable cell line development service for bioproduction purposes. Our stable cell line service, based on ECACC licensed CHO-K1 cells, aims to provide a high-yield guaranteed and speedy timeline to meet your downstream applications.

FEATURES



High-Yield

>5 gram/L for antibody



Expertise

10+ years of experience, 100+ cell lines delivered



No Royalty Fee

For multiple products

WORKFLOW



COMMERCIAL LICENSE FOR CHOK1BN

Biointron's CHOK1BN cell line, licensed from ECACC (CHO-K1), is suspension-adapted in basic CD media. The cell line can be sublicensed for commercial use, and it meets the requirements for registration in both China and US.

FEATURES

Worldwide Sublicense

No Royalty Fee

Perpetual & Irrevocable

Meets the requirements for registration in both China and US

FEATURES OF CHOK1BN

Suspension-adapted in basic CD medium and can apply to various medium

High stability and productivity (>5 g/L)

Suitable for monoclonal antibody, bispecific antibody, factors, etc

Adaption of CHOK1BN

Thawed CHOK1 cell line from ECACC

→

Culture the adherent CHOK1 cell line

→

Suspended adaption of CHOK1 cell line by CD serum-free medium to get CHOK1BN cell line

Suitable for various medium with high monoclonal antibody yield

FOR RECOMBINANT PROTEINS: STABILITY TEST FOR OVER 2 MONTHS

The doubling time of the cells is 22±1 hours. During the plateau period of feed batch, the cell density is 20-25*10⁶ cell/ml, making it easier for scale up production.

Excellent batch difference, the titer variation is just <10%

Stability Studies

TARGET POSITIVE ANTIBODY

- ✓ To benchmark novel biotherapeutics (biologics) for pre-clinical lead identification
- ✓ For the development of potency assays

FOR RESEARCH USE ONLY

SPECIFICATIONS

Endotoxin < 1.0 EU/mg determined by the LAL method

Purity > 95% determined by SEC-HPLC

SDS-PAGE Image of Human PDL1/His Protein

SDS-PAGE Image of Anti-PDL1 Antibody

The purity was more than 99% as determined by SEC-HPLC

Human PD-L1 Protein, His Tag (Cat. No. H-PDL1-1) can bind Research Grade Anti-PDL1 Antibody

Kinetics analysis for PDL1(Cat: H-PDL1-1) binding to Research Grade Anti-PDL1 Antibody (Cat: B2016)(Top dose 40nM, 3-fold dilution)

KD (M)	2.10E-10
ka (1/Ms)	8.19E+05
kd (1/s)	1.72E-04
Rmax (RU)	115.7
Chi² (RU²)	9.48E-01

Observations:
Close KD values were obtained for PDL1 binding to anti-PDL1 antibody compared with historical data (0.4nM).

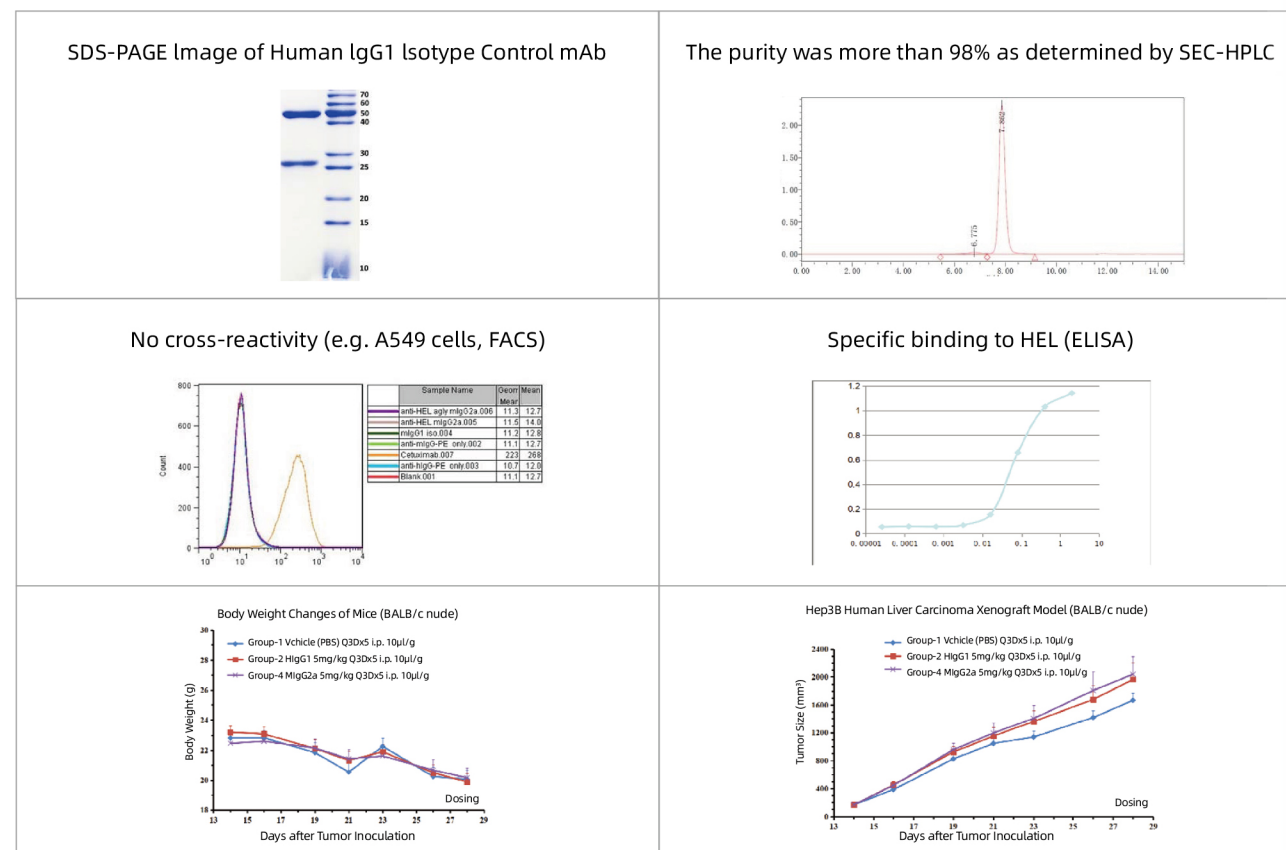
ISOTYPE NEGATIVE ANTIBODY

Choosing the correct isotype control antibody is an important part of most antibody-based experiments. Isotype control antibodies have no relevant specificity, and they enable the researcher to distinguish non-specific backgrounds binding from antigen-specific antibody binding.

Our isotype controls are specific anti-HEL (Hen Egg Lysozyme) and has no known cross-reactivities to humans.

Number	Product Name	Number	Product Name
B118301	anti-HEL- Mouse IgG1	B109801	anti-HEL-Human IgG1 (N297A)
B115101	anti-HEL- Mouse IgG2A	B107803	anti-HEL-Human IgG2
B192301	anti-HEL- Mouse IgG2A LALA	B109803	anti-HEL-Human IgG3
B117901	anti-HEL-Human IgG1	B109805	anti-HEL-Human IgG4 (S228P L235E)
B109802	anti-HEL-Human IgG1 LALA	B107804	anti-HEL-Human IgG4 (S228P)

*FOR MORE PRODUCTS AND RELATED DETAILS, PLEASE CONTACT US AT WWW.BIOINTRON.COM



12+

Years of Experience

1,500+

Companies Served Globally

80,000+

Antibodies Delivered Annually

