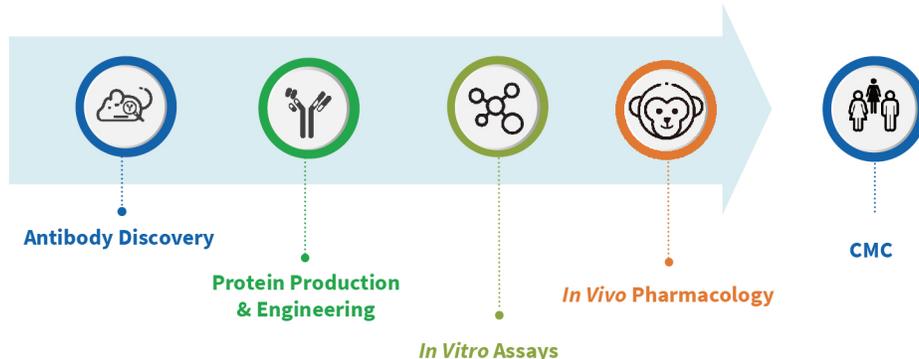


CRO Services: One-Stop Shop, Modular Services

Drug Development Experience Empowering Research Services for Biologics

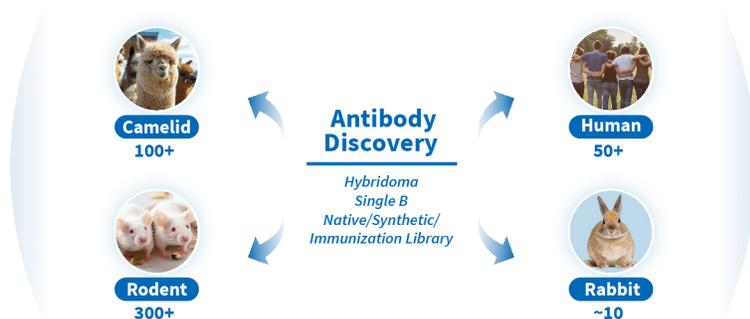
- Antibody Discovery
- Protein Production & Engineering
- *In Vitro* Assays
- *In Vivo* Pharmacology

Leveraging extensive drug development expertise, we offer modular solutions that span every stage of biologics research. With a robust track record across diverse modalities, such as monoclonal, bispecific and multispecific antibodies, fusion proteins, TCRs, miniproteins, cytokines, and enzymes, we provide innovative, customized services to seamlessly advance client molecules from concept to CMC development.



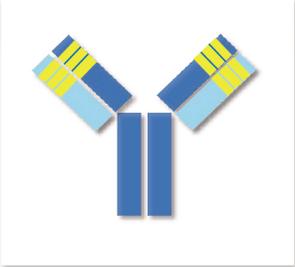
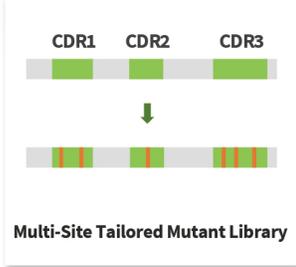
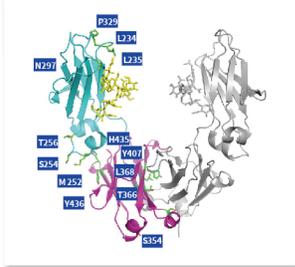
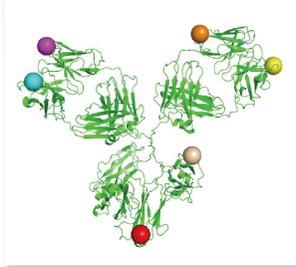
Cutting-Edge Antibody Discovery to Fast-Track Lead Identification

Backed by industry-leading expertise, we provide advanced antibody discovery platforms across multiple species. With a proven track record of 400+ successful antibody discovery projects, 20+ client programs in clinical development and two on the market, we consistently deliver high-quality solutions that drive efficient, successful lead identification.

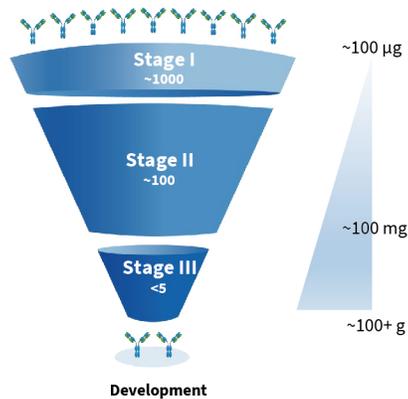


Robust Antibody Design & Engineering for Improved Developability

Our antibody design and engineering services integrate late-stage CMC insights early in the drug discovery stage. Leveraging *in silico* analysis, structural biology, and *in vitro* characterization, we offer tailored protein engineering services to enhance developability and therapeutic potential of diverse modalities.

Humanization	Affinity Maturation	Fc Engineering	Developability ↑
<ul style="list-style-type: none"> Fast: ~4 weeks Success rate >98% Applicable to rodent, camelid, rabbit and chicken antibodies 	<ul style="list-style-type: none"> High success rate in improving affinity by 10-1,000x Fast: ~2-3 months 	<ul style="list-style-type: none"> Effector function (ADCC, CDC) enhanced or eliminated Half-life extended or shortened 	<ul style="list-style-type: none"> Remove PTM hotspots Improve expression Improve solubility Improve stability
			

High-Titer, High-Quality Antibody & Protein Production



WuXian Transient™

Ultra 96+

777

Quick 'n' Clean

Micro Developability

Premium BsAb

GRAMExpress

Developability

WuXian Express™

We provide innovative platforms for antibody and protein production, from high-throughput, small-scale expression to high-purity, gram-level yields suitable for both *in vivo* and *in vitro* studies. Leveraging ultra-high-titer CHO expression systems, extensive drug development expertise, and state-of-the-art facilities, we deliver high-titer, high-purity antibodies and proteins that meet the highest industry standards.

Case Study #1:

GramExpress Platform Enables Gram-Level, High-Purity mAb Production in 3-4 Weeks

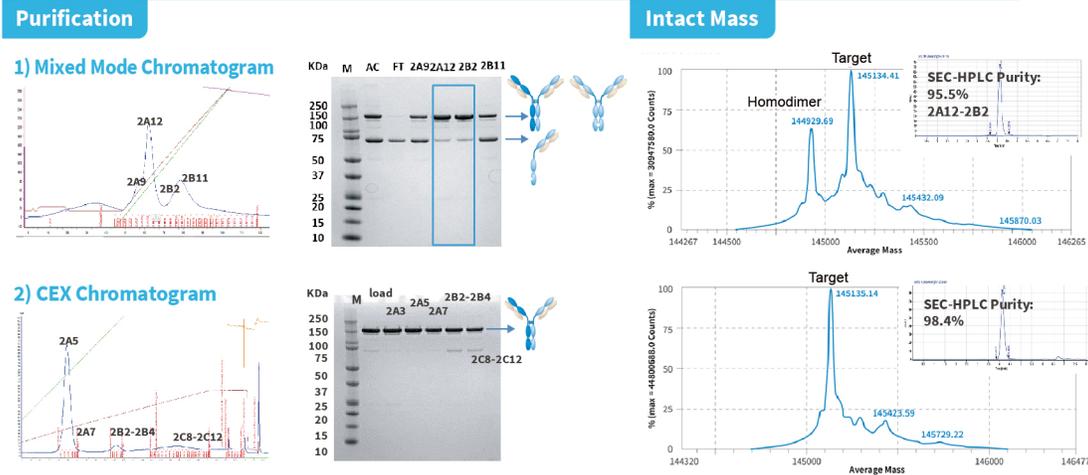
In this case study, four mAbs were produced at scales ranging from 4 L to 80 L. Each molecule achieved gram-level yields in a 3-4 week timeline, with >98% purity and endotoxin levels below 0.1 EU/mg. Product purity was further confirmed by Intact Mass analysis.

Molecule 1	Molecule 2	Molecule 3	Molecule 4
80L mAb	10L mAb	4L mAb	60L mAb
hulgG1	mlgG2a	hulgG1	hulgG1
AC-CEX-UF/DF	AC-CEX-UF/DF	AC-SEC	AC-AEX*-CEX-UF/DF
Yield: 110 g	Yield: 11.9 g	Yield: 3 g	Yield: 80 g
Purity: 99.8%	Purity: 98.8%	Purity: 99.8%	Purity: 98.5%
<0.01 EU/mg	<0.16 EU/mg	<0.1 EU/mg	<0.02 EU/mg
4 weeks	4 weeks	3 weeks	4 weeks

Case Study #2:

Intact Mass-Assisted Purification for Common LC BsAbs with >98% Heterodimer Purity Using the Premium BsAb Platform

In this case study, Mixed Mode was employed as the first polishing step to remove half antibodies. However, Intact Mass indicated the presence of homodimers. CEX was applied as the second polishing step to eliminate homodimers and trace amount of half antibodies. The final product achieved >98% heterodimer purity, as confirmed by Intact Mass analysis.



Early-Stage Protein Analytics Platform for Lead Screening and Optimization

We offer a full panel of protein characterization services for lead screening and optimization. Notably, the Micro Developability platform is specifically designed for early-stage developability assessment, including sequence liability, biophysical properties, PK, and manufacturability, to provide actionable insights that guide lead optimization.

Mass Spectrometry	Purity & Impurity Test	Binding Assays	Biophysical Assays
<ul style="list-style-type: none"> Intact Mass Peptide Map/Disulfide Glycan analysis Proteomics/PK 	<ul style="list-style-type: none"> SEC-HPLC/CEX-HPLC NR/R CE-SDS icIEF rDNA/HCP/proA Endotoxin 	<ul style="list-style-type: none"> SPR BLI ELISA 	<ul style="list-style-type: none"> Micro Developability DSF, DLS, AC-SINS FcRn binding BV/DNA/Insulin ELISA

Comprehensive *In Vitro* Assays for Diverse Modalities

We support a broad range of *in vitro* assays for diverse modalities. By integrating insights from publications, patents, and extensive hands-on experience, our platform enables efficient candidate screening and characterization with exceptional quality, consistency, and speed.

Binding and Competition Assays	ADC-Related Assays	T Cell Engager Assays	Autoimmune and Inflammation
<ul style="list-style-type: none"> ELISA, FACS, SPR, FRET Single-antigen binding Dual binding Receptor-ligand blocking Epitope binning 	<ul style="list-style-type: none"> Internalization Cytotoxicity Bystander killing Serum/plasma stability (DAR, payload) 	<ul style="list-style-type: none"> TCE reporter gene assay T cell killing Cytokine release T cell activation 	<ul style="list-style-type: none"> Immuno-reporter gene assay Cell functional assay Immune assays ECD shedding ADCC, ADPC, CDC

End-to-End, Multi-Species *In Vivo* Pharmacology

With a track record of over 800 successful projects, we provide end-to-end, multi-species *in vivo* pharmacology services spanning PKPD, efficacy, toxicology, and histology studies. With deep expertise in key therapeutic areas, such as oncology, autoimmune diseases, and inflammatory disorders, we offer seamless support from preclinical research through IND filing and beyond.

Multiple Species



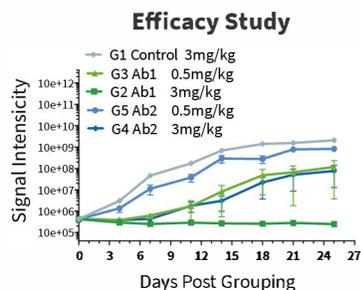
- Mouse, rat and monkey

PK, PD & Exploratory Toxicity

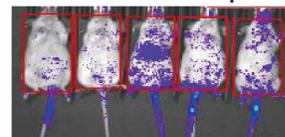
- PK, PD, IHC
- *In vivo* imaging and biodistribution
- *In vitro* & *ex vivo* biomarker and MOA studies

***In Vivo* Efficacy Study Models**

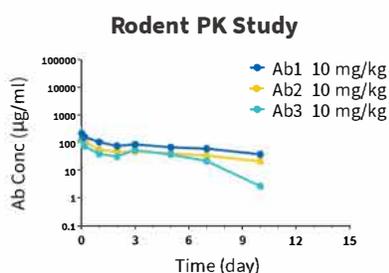
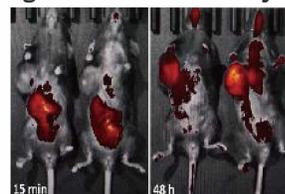
- Syngeneic
- Humanized/WT
- CDX; CDX/PBMC
- GVHD
- Autoimmune diseases
- Rare diseases
- Metabolic diseases



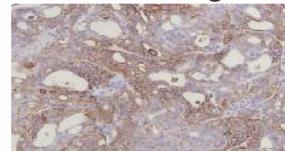
Tumor-Luciferase Reporter



Organ Distribution Analysis



IHC Staining



Key Features of NHP PK/PD/Tox Services

- Monkeys scheduled within 7 days
- Highly customized assay development
- Adaptable to accommodate specific client requirements
- Expert data interpretation with proactive troubleshooting
- Total timeline of 6-11 weeks



About WuXi Biologics CRO Services

WuXi Biologics is a leading global CRDMO, with the R represented by our premium-quality CRO Services. With expertise in diverse drug modalities, we deliver comprehensive research services, including antibody discovery, protein production and engineering, and *in vitro/in vivo* testing, to seamlessly advance our clients' molecules from concept to CMC development.

Drug Development Expertise Empowering Research Services for Biologics

<https://www.wuxibiologics.com/cro-services/> | PS_Marketing@wuxibiologics.com

WuXi Biologics
Global Solution Provider