

# Integrated *In Vivo* Pharmacology Services

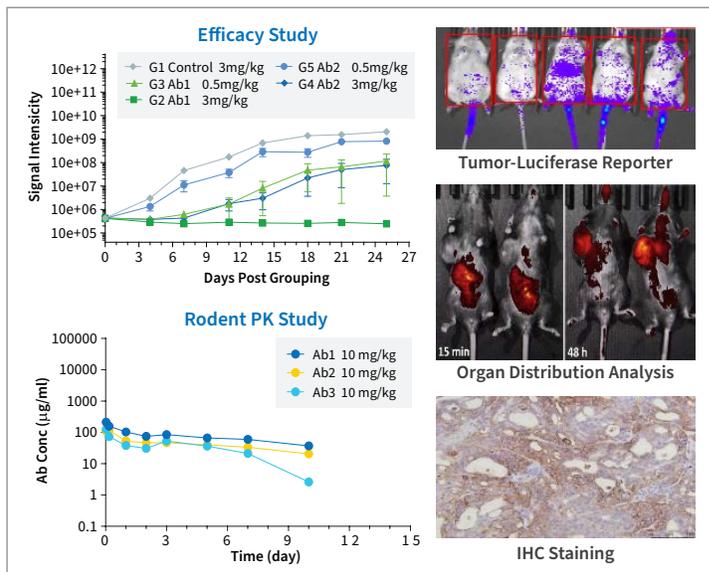
- Pharmacokinetics (PK) and pharmacodynamics (PD)
- Efficacy
- Toxicology
- Immunohistology

With experience spanning over 800 projects, WuXi Biologics offers integrated, end-to-end *in vivo* pharmacology services across diverse therapeutic modalities, including monoclonal and bispecific antibodies, ADCs, fusion proteins, and CAR-T therapies. Our deep expertise in key therapeutic areas such as oncology, autoimmune diseases, inflammatory disorders, and diabetes ensures streamlined support from preclinical studies through IND filing and beyond.

## *In Vivo* and *Ex Vivo* Capabilities

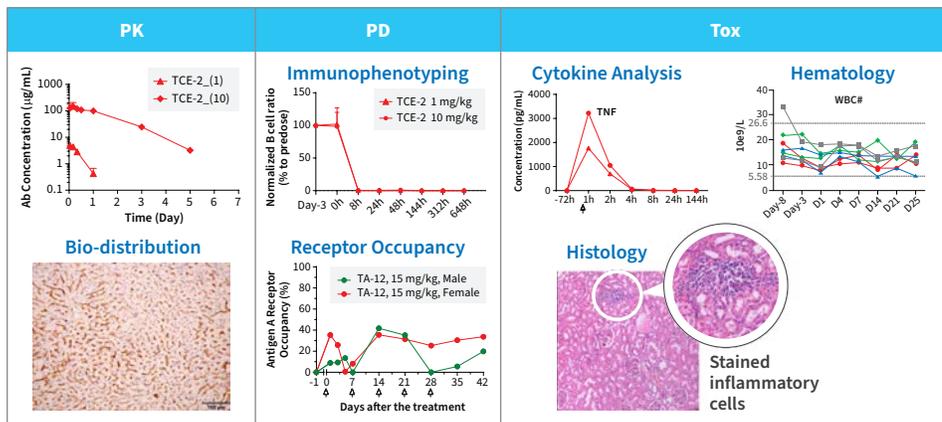
Our *in vivo* and *ex vivo* capabilities encompass multiple species, extensive PK/PD/Tox studies, and a broad array of efficacy models, delivering actionable insights into mechanism of action (MOA), distribution, and drug candidate efficacy to accelerate your biologic drug projects.

Multiple Species	PK, PD, and Exploratory Toxicity	<i>In Vivo</i> Efficacy Study Models
<ul style="list-style-type: none"> <li>• Mouse, rat and monkey</li> </ul>	<ul style="list-style-type: none"> <li>• PK, PD, IHC</li> <li>• <i>In vivo</i> imaging and bio-distribution</li> <li>• <i>In vitro</i>, <i>ex vivo</i> biomarker and MOA studies</li> </ul>	<ul style="list-style-type: none"> <li>• Syngeneic Humanized/WT</li> <li>• CDX; CDX/PBMC</li> <li>• GVHD</li> <li>• Autoimmunity</li> <li>• Rare disease</li> <li>• Metabolic disease</li> </ul>



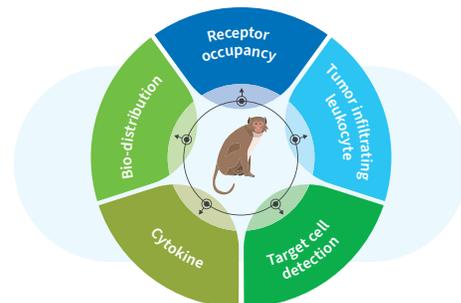
## Holistic PK, PD, and Toxicity Studies

Our comprehensive PK, PD, and toxicity studies include multi-species screening, a dose-concentration-response evaluation, and a determination of safe dosage levels, facilitating leads optimization and supporting every stage of drug development, from early discovery to IND filing.



## PK, PD, and Toxicity Service Features

- **Rapid response:** Monkeys scheduled within 7 days
- **Highly customized assay development**
- **Flexibility:** Adaptable to specific client requirements
- **Data interpretation:** Insightful analysis for integrated projects
- **Total timeline:** 6–11 weeks



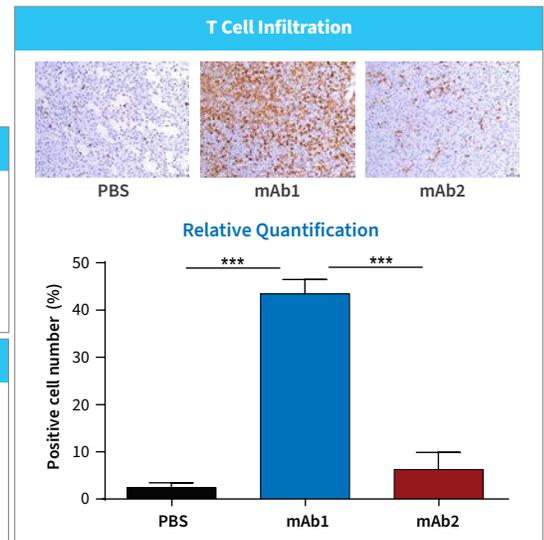
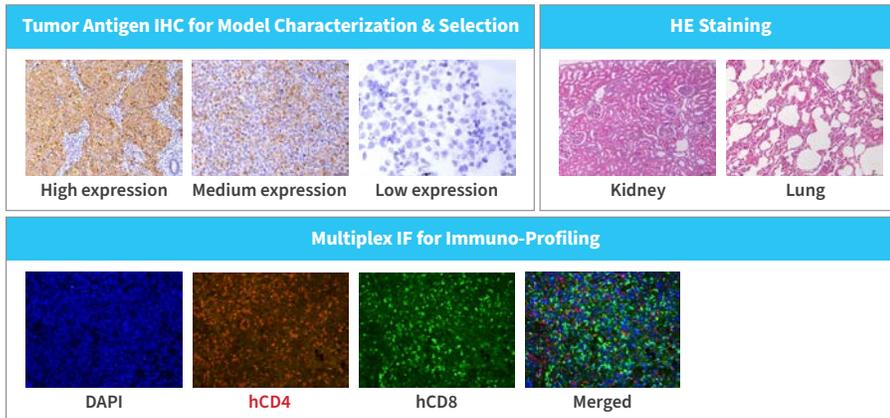
## Extensive Efficacy Model Collections



\*Build engineered cell-lines and establish new models on demand

## Comprehensive Immunohistochemistry Capabilities

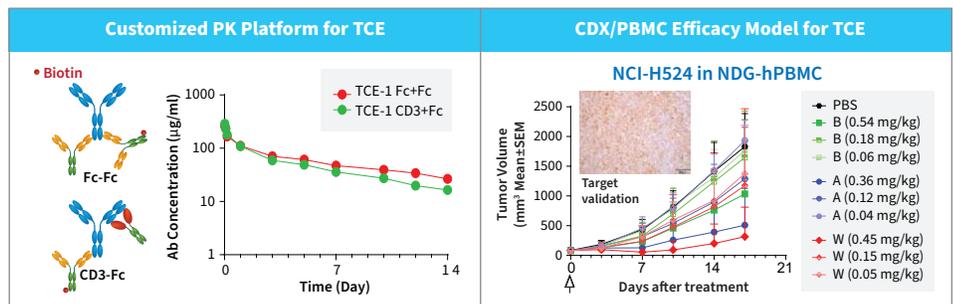
- **Comprehensive panel of staining methods:** Includes HE, IHC, IF, EHC, and TCR
- **In-depth tissue analysis:** Target evaluation, antibody distribution, immune cells infiltration, and more
- **Qualified pathology analysis**



## Case Study 1: Single-Source Solution for *In Vivo* Characterization of TCE

In this case study, the PK of TCEs was evaluated *in vivo*. The dose-concentration-response relationship for efficacy was also determined using a cell-derived xenograft (CDX) and peripheral blood mononuclear cells (PBMC) model designed based on tumor target validation through immunohistochemistry (IHC).

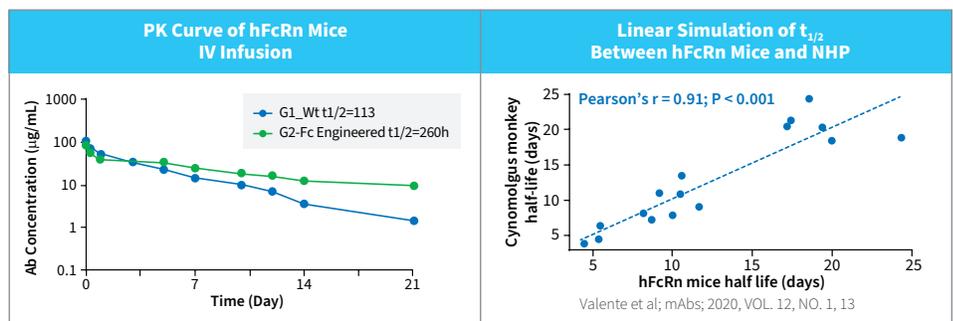
- **Customized PK platform:** Enables precise measurement of total IgG and TCE levels
- **Validated CD3 antigen:** Ensures specificity and efficacy
- **Rationally designed CDX and PBMC efficacy model:** Supported by target validation to enable potent PBMC donor screening



## Case Study 2: Established hFcRn Mouse Model for Early-Stage Fc Engineering Assessment

In this case study, we use a well-established hFcRn mouse model to assess Fc engineering at an early stage and simulate the *in vivo* PK profiles of both human mice and non-human primates (NHPs).

- **Enhanced PK profiles:** An Fc-engineered antibody shows improved PK compared to its wild-type counterpart.
- **Strong linear correlation in t<sub>1/2</sub>:** A consistent t<sub>1/2</sub> correlation was observed between hFcRn and NHP models.



## About WuXi Biologics

WuXi Biologics is a leading contract research, development, and manufacturing organization (CRDMO) that provides end-to-end capabilities to healthcare organizations worldwide. With operations in China, the United States, Ireland, Germany, and Singapore, we enable our partners to effectively and efficiently bring biologics and vaccines to patients worldwide through our comprehensive and high-quality drug development model.

The world's leading global single-source platform from concept to commercialization

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**WuXi Biologics**  
Global Solution Provider