DiversimAb™ Mouse for Antibody Discovery

Created for diversity and performance.

DiversimAb discovery technology is propelled by proprietary genetically-engineered mice that elicit robust, rapid immune responses against traditionally challenging and poorly immunogenic targets. This platform, developed by Abveris (now part of Twist Biopharma Solutions), delivers antibodies that other *in vivo* systems cannot. It enables deep and efficient screening of key antibody attributes, including affinity, sequence diversity, specificity, species cross-reactivity, and functionality. The DiversimAb family comprises two best-in-class hyperimmune mouse strains – DiversimAb & DivergimAb – designed to maximize repertoire diversity for antibody discovery.

BENEFITS

- Broaden diversity and overcome immunodominance
- Shorten the timeline to high-affinity antibodies
- Discover antibodies against challenging targets
- Royalty-free

WELL-VALIDATED APPLICATIONS

- Hybridoma and single B-cell screening
- Therapeutics discovery
- Anti-idiotype antibodies for PK/ADA assays
- Mouse anti-mouse surrogate antibodies

EXPERIENCED IN VARIOUS TARGETS AND MODALITIES

- Cell-surface targets
- Phosphorylated and non-phosphorylated residues
- Glycan-targeting antibodies
- Single amino acid mutations
- Small molecules

Robust immune response to high homology targets

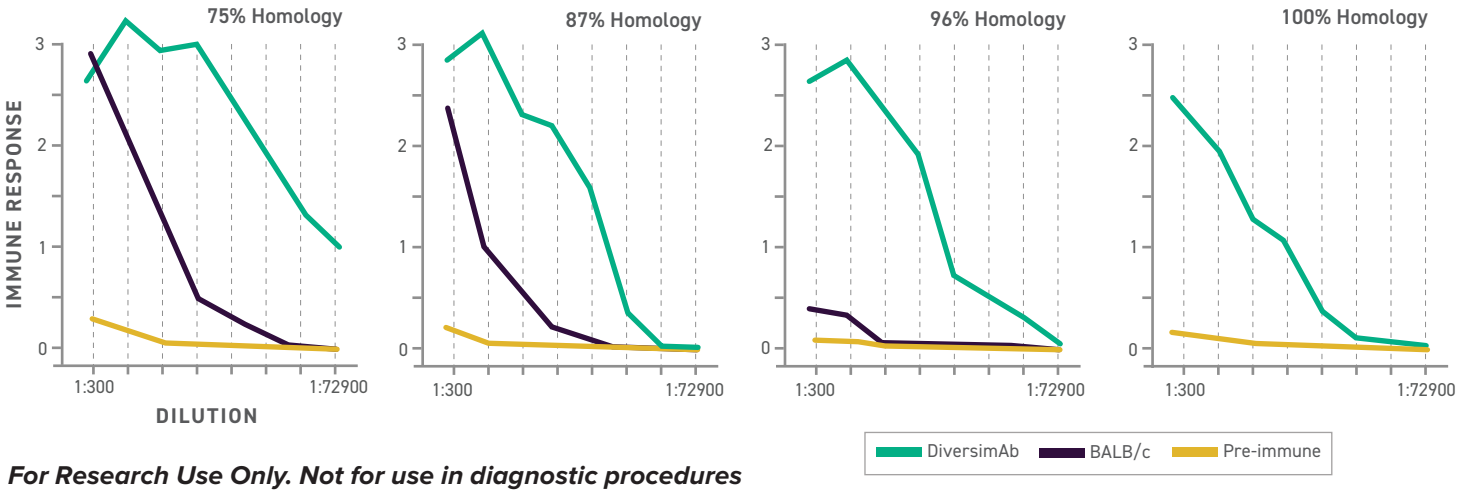
DiversimAb mice have a more robust immune response than wild-type (WT) mice against the same antigen, offering key advantages in generating antibodies against highly conserved targets compared to traditional models.

To fully leverage the DiversimAb platform, Twist Biopharma Solutions has developed customized adjuvant and immunization strategies to generate antibodies against a broad range of antigen classes. The platform can effectively drive robust antigen-specific immune responses against many different types of cell surface receptors, including GPCRs and ion channels.

DiversimAb mice produce antibodies with:

- Suitable affinity
- Species cross-reactivity
- Functional activity
- Binding epitope specificity
- Favorable developability

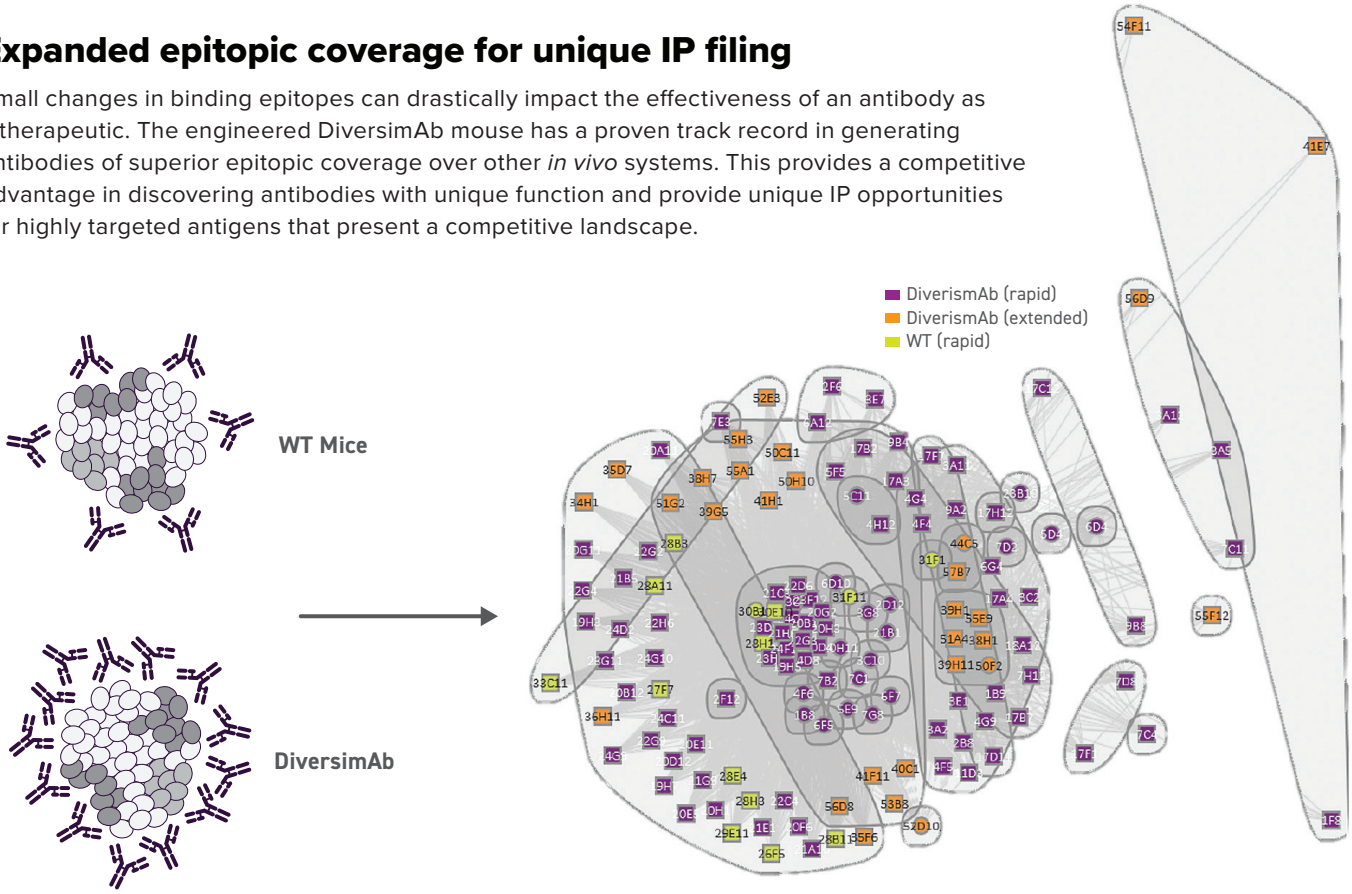
DiversimAb continues to mount an immune response despite increasing sequence homology.



For Research Use Only. Not for use in diagnostic procedures

Expanded epitopic coverage for unique IP filing

Small changes in binding epitopes can drastically impact the effectiveness of an antibody as a therapeutic. The engineered DiversimAb mouse has a proven track record in generating antibodies of superior epitopic coverage over other *in vivo* systems. This provides a competitive advantage in discovering antibodies with unique function and provide unique IP opportunities for highly targeted antigens that present a competitive landscape.



Broadened epitope diversity provides more shots on goal when searching for functional binders

Diverse affinities of antibodies

Twist Biopharma Solutions has used the DiversimAb platform to successfully complete hundreds of antibody discovery campaigns across a wide spectrum of target types. DiversimAb antibodies consistently demonstrate a broad range of affinities, spanning the subnanomolar to double-digit nanomolar regions, which enables the selection of antibodies with appropriately tuned affinity for every application and therapeutic modality.

K_D analysis of DiversimAb antibodies

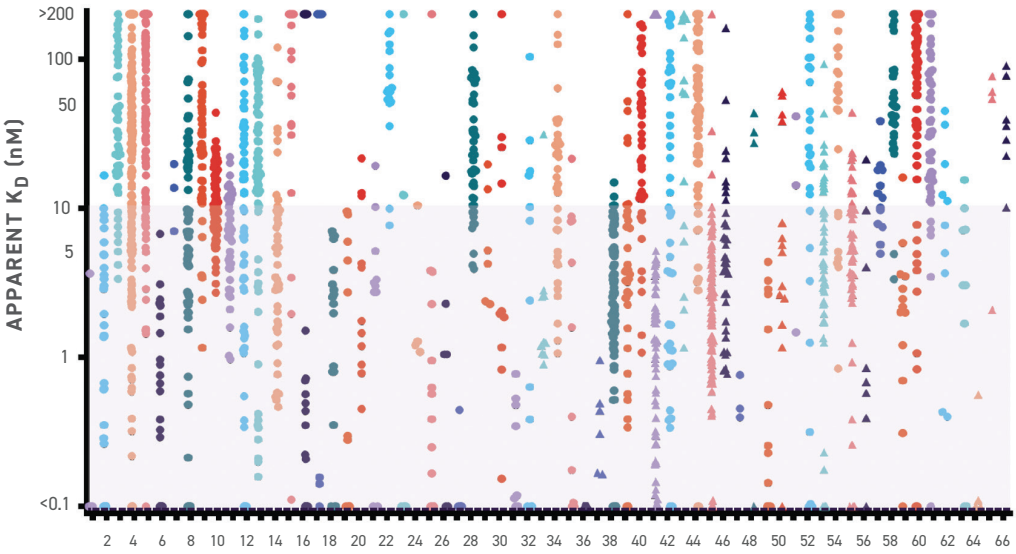


Figure Description: An affinity plot of antibodies recently discovered using DiversimAb technology in Twist Biopharma Solutions' campaigns. These antibodies display a desirable affinity range for therapeutic applications under accelerated timelines.

CASE STUDY

Twist Biopharma Solutions was recently engaged to target a challenging cell surface receptor with a human/cyno sequence homology of 95% and a human/mouse sequence homology of 93%, respectively. This campaign aimed to develop therapeutic antibody candidates where previous attempts using a humanized mouse failed to generate sufficient species cross-reactive clones.

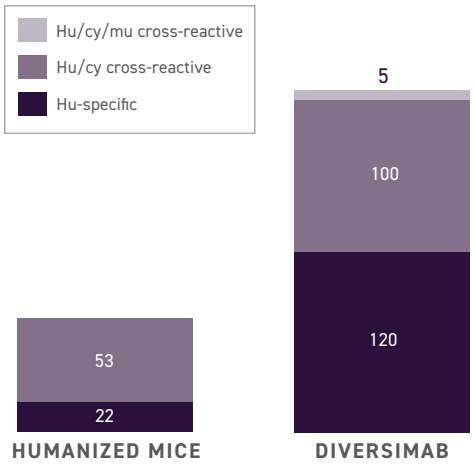
A rapid, 3-week immunization strategy was deployed to deliver the following client-specific requirements successfully:

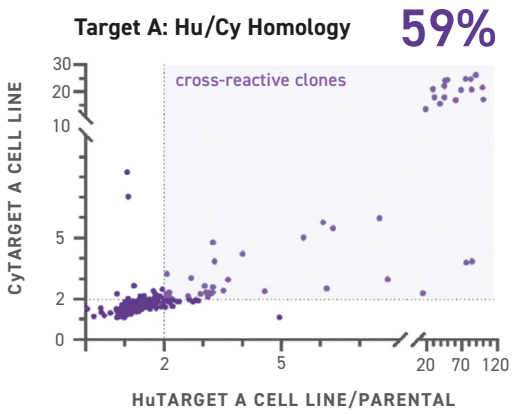
- Human/cyno and human/murine cross-reactivity
- Functional ligand-blocking activity
- Broad range of affinities

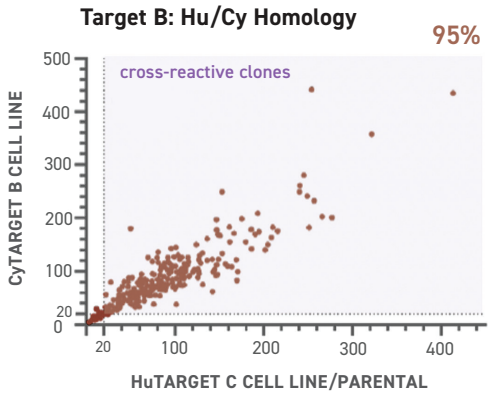
Species cross-reactive antibodies

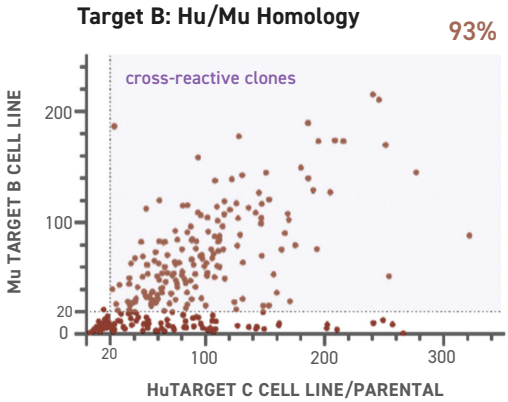
Cross-reactivity is an important attribute of therapeutic candidates required for *in vivo* efficacy and toxicity evaluation. In many cases, it can be challenging or impossible to discover cross-reactive antibodies using other *in vivo* systems..

DiversimAb mice generate enhanced antibody diversity, which gives them an exceptional ability to develop species cross-reactive antibodies against a wide range of conserved therapeutic targets.









What can we help you discover?

Twist Biopharma Solutions is committed to helping you realize the potential of your biggest biologic development programs. Wherever you are in the development pipeline we have a solution that will elevate you to the next level of discovery

LEARN MORE

twistbioscience.com/twist-biopharma-solutions
biopharmasales@twistbioscience.com