

# WE DELIVER INNOVATIVE SOLUTIONS DeepDisplay Antibody Discovery Platform

A powerful new technology utilizing a combination of Ligand's OmniAb<sup>®</sup> transgenic animal platform and ImmunoPrecise Antibodies' custom phage display antibody selection.

## The DeepDisplay Advantage:

- Accelerated human antibody discovery
- Obtain sequence-diverse, highly-specific panels of antibodies
- Select rare, therapeutically relevant, fully-human antibody candidates
- Overcome challenges with complex, cell membrane targets

Request a Free Target Analysis with our Experts.

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# DeepDisplay<sup>™</sup> Case Study



## **Transmembrane Therapeutic Target**

Deep Display<sup>™</sup>: Phage Display featuring OmniAb<sup>®</sup> Transgenic Rodents

#### Objective

Generation of fully-human, therapeutic lead antibody candidates with mouse, cyno and human crossreactivity against a target, comparing phage display technology with hybridoma-based discovery for a large pharmaceutical company.

#### **Project Phases**

Immunization of OmniAb<sup>®</sup> rodents using human and cyno alternating immunization strategies Best responding rodents were selected for immune scFv phage library generation and/or hybridoma generation via electrofusion

Screening and selection

Outputs from both methods were screened for target specificity, species cross-reactivity and sequence diversity

#### DeepDisplay<sup>™</sup> Results

- Five out of eight rodents showed a good immune response against both human and cyno recombinant target protein
- Screening of **360** randomly picked monoclonals from top five selection outputs resulted in a panel of antibodies with diverse target-reactivity profiles
- 20% of the screened monoclonals showed full crossreactivity toward plate-immobilized and, importantly, cell-associated human, cyno and mouse target
- Sequence analysis of the top **90 phage** clones showed **75 phage-derived unique antibody variable** domain sequences

#### Conclusion

- A panel of sequence diverse, human lead antibodies specifically directed against a transmembrane target protein was generated in relatively short time span
- DeepDisplay<sup>™</sup>, the powerful and unique antibody discovery platform, yielded a diverse pool of antibody lead candidates with broad species cross-reactivity

#### **Sequence Diversity Analysis**

