



Ab Studio Inc.

your partner for therapeutic antibody development

Therapeutic Antibody Discovery

- ▶ Hybridoma + Computer aided design
- ▶ Phage Display + Computer aided design

Unique features for hybridoma technology:

- ▶ Apply computer-aided modeling to identify epitopes exposed on 3D surface of antigen
- ▶ Based on target biology, 3D information and bioinformatics (such as cross-species homology), design, and apply appropriate strategy for immunization
- ▶ Based on target biology and protein structure, design and apply high throughput binding, functional, and epitope binning assays to screen the best functional antibody
- ▶ Align the sequences of several “best functional antibodies” to get “best developable antibodies” by screening candidates with: high “human score” + less immunogenicity epitopes + less PTMs

Unique features for phage display technology:

- ▶ In-house human naïve ScFV phage library with VH and VL that is separated by a restriction enzyme for separate replacement of VH and VL (suitable for common light chain screening)
- ▶ Leading phage screening based on antigen binding ability pre- and post-heating, ScFV sequences, and other developability features.
- ▶ After building up an Fv model structure, we analyze:
 - Aggregation surfaces on Fv model
 - PTMs on the Fv model
 - Immunogenicity epitopes inside ScFV sequence(s)
 - “Naturalness” of VH/VL interface by aligning the query ScFV’s VH/VL interface to that of real 3D antibody structures in the PDB database

Unique features of VHH single domain Ab discovery:

