Rational Affinity Maturation Platform (RAMP™)

Building upon >18 years’ experience in antibody engineering and extensive humanization success, Fusion Antibodies has developed a novel affinity maturation platform (RAMP™) for the rapid optimisation of your antibody.

Rational Library Design
- Proprietary approach to library design
- Exploring the natural somatic hypermutation space
- Mutations in framework and CDRs
- Sequence liabilities not allowed

Rapid in silico Selection
- Molecular docking to investigate impact of mutations on mAb: Antigen interaction
- Selection for improved binding potential and predicted stability
- Enriched ‘micro’ library of <100 variants selected for expression and characterisation

Expression of enriched ‘micro’ library
- Expression in full-length format in CHO cells

• in vitro characterisation of variants: BLI (binding kinetics analysis), DSF (Tm), expression yield, SEC (aggregation potential)

Platform Highlights
• >10-fold affinity improvement observed per round
• No need to generate a large physical library of variants
• High proportion of expressed mAbs display improved affinity (>50%)
• Design approach generates natural mutations with unpredictable improvements
• Dual selection increases probability of development success
• No bias for scFv format or bacterial expression (required for phage display)

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discover more at fusionantibodies.com
Your Full Service Antibody Solution
Fusion Antibodies offers a range of competitive services for biologics discovery and development.

Discovery       Optimization       Preclinical       Clinical

Discovered
HYBRIDOMA GENERATION
B CELL SCREENING
ANTIBODY SEQUENCING

Engineering
CDRx™ HUMANIZATION
REFORMATTING TOOLKIT
ANTIBODY DEVELOPABILITY
AFFINITY MATURATION

Supply
TRANSPORT EXPRESSION
cGMP STABLE CELL LINE
DEVELOPMENT
ANTIBODY CHARACTERIZATION

Why Fusion Antibodies?

✔ Guaranteed quality
✔ Cutting edge technologies
✔ Unrivalled expertise
✔ Maximum flexibility

We use our expertise, services and support to accelerate your project into the clinic.

“I would like to recommend Fusion Antibodies to Japanese Pharmaceuticals and biotech companies who are developing new therapeutic monoclonal antibodies. NBHL is very pleased with the state of the art Fusion Antibodies' technologies including humanization and design of monoclonal antibodies for therapeutic purposes. Fusion Antibodies is an indispensable partner for our GPCR mAb platform, MoGRAA® discovery engine, to advance toward clinical development!”

Dr Kiyoshi Takayama Ph.D. Founder and President of NB Health Laboratory Co., Ltd.

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