RenMab

An Innovative Platform from Biocytogen

ONE LICENSE FOR 3 PLATFORMS

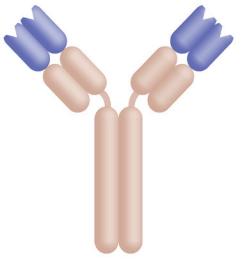
Biocytogen provides RenMab™, RenLite™ and RenNano™ mouse platforms that are powerful tools for generating fully human antibodies in various formats, including Bispecific, Multispecific, Heavy chain only antibody and Nanobody. One license covers all three platforms.

RenMab™ Family

Guide
- mouse region
- humanized region

RenMab™

Best-in-class fully human antibody platform

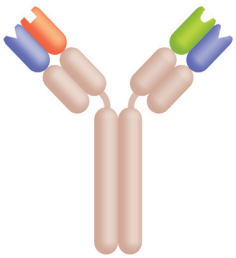


Full human heavy chain and kappa light chain V(D)J loci substitution

Available for licensing now

RenLite™

Bispecific/multispecific antibody discovery platform

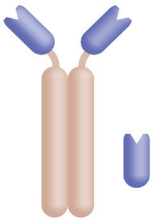


Full human heavy chain repertoire combined with a common light chain substitution

Available for licensing now

RenNano™

Heavy chain only antibody (HcAb) & Nanobody platform



Full human heavy chain VDJ loci substitution with heavy chain CH1 knocked out

Coming soon

Partnership

Licensing Options

License directly with Biocytogen
Option to use through other CROs or in-house

Co-development Opportunities

Exclusive partnership and co-development opportunities for Project Intergrum

Flexibility

Flexible terms tailored to accommodate different antibody programs

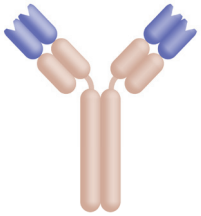
RenMab™

BIOCYTOGEN

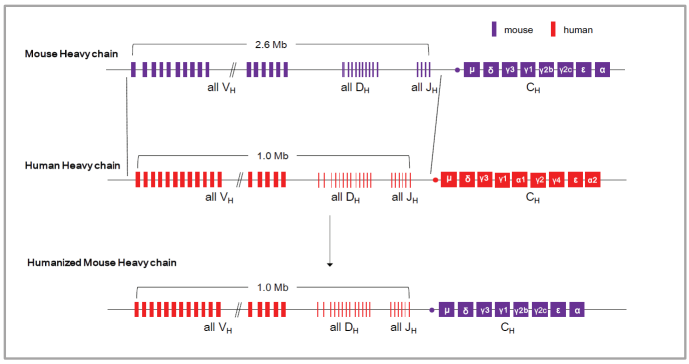
Key Features of RenMab™

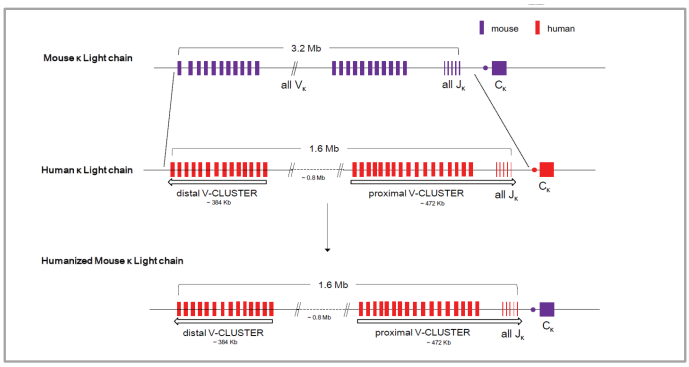
- **Full human heavy chain and kappa light chain V(D)J loci substitution *in situ*.**
- **Exhibit human like CDR features and repertoire diversity.**
- **Robust immune response comparable to wild type mice.**
- **High binding affinity at subnanomolar range.**

RenMab™



Schematic of humanization in RenMab™ mouse



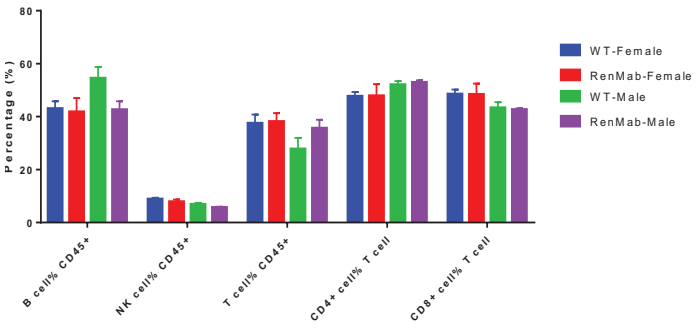


- Whole mouse variable regions of the heavy and k light chains are replaced by full human heavy chain VDJ segment and light chain VJ loci *in situ*.

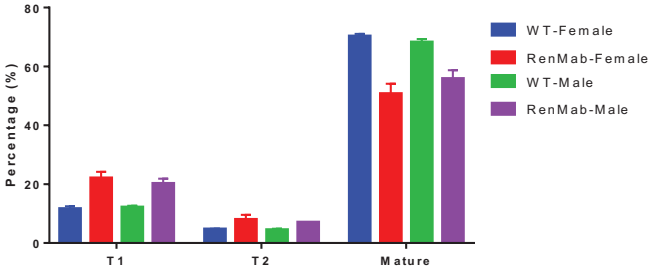
Validation Data

RenMab™ mouse immune cells profiling suggest a comparable immune system with wild type mouse

A.



B.



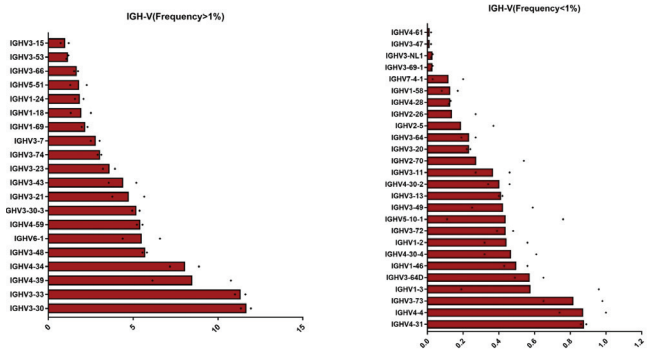
- Immune cells profiling in spleen (left) and B cell development in spleen (right) were evaluated.
- No significant difference was observed between RenMab™ and wild type mice.
- In RenMab™ mice, slight delay in B cell development was observed.

RenMab™

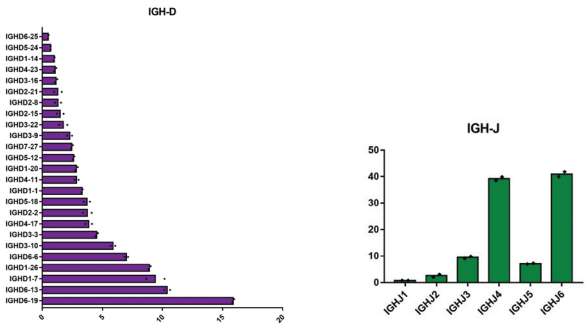
BIOCYTOGEN

IGHV, IGHD and IGHJ germline usage of naïve Renmab™

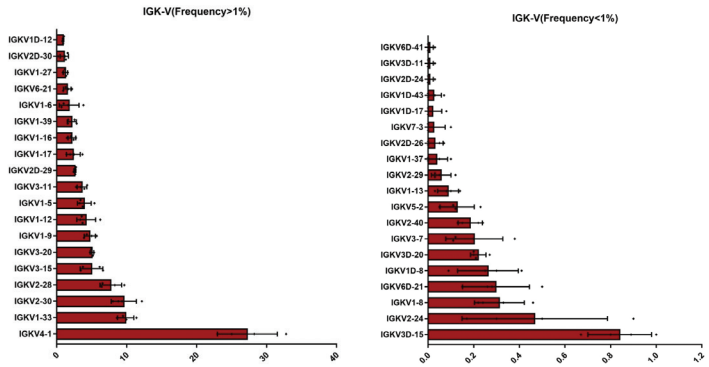
A. RenMab™ Naive Mouse Heavy Chain IGHV Germline Usage



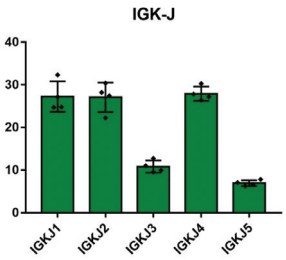
B. RenMab™ Naive Mouse Heavy Chain IGHD & IGHJ Germline



C. RenMab™ Naive Mouse Kappa Chain IGKV Germline Usage



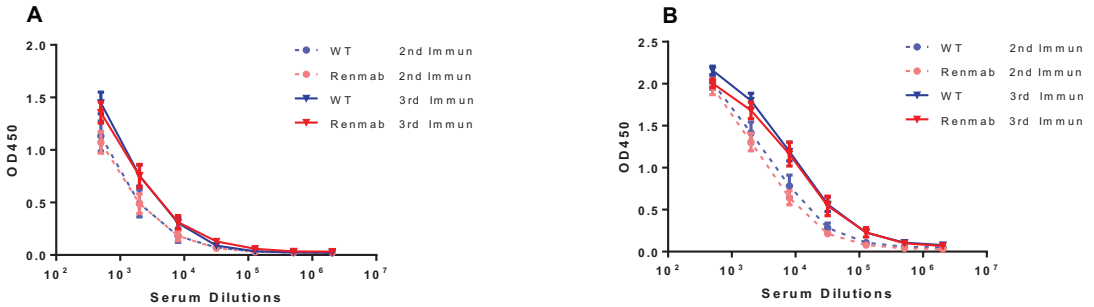
D. RenMab™ Naive Mouse Kappa Light Chain IGKJ Germline Usage



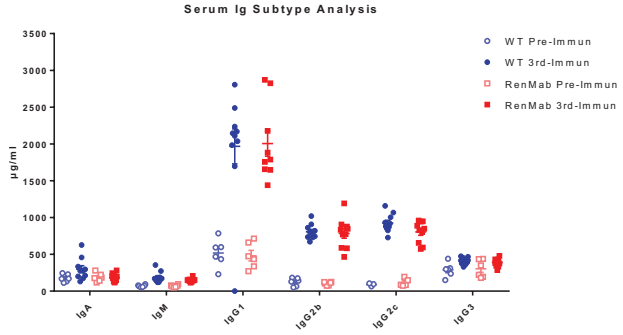
- Germline usage of both heavy and light chain V(D)J domains in RenMab™ naïve mouse are very similar to the ones in human.

RenMab™ Mouse demonstrates highly similar immune responses compared to wild type

A. Robust immune response in RenMab™ elicited by a panel of antigens



B. RenMab™ mouse shows normal levels of Ig subtypes, suggesting successful class switch



- No significant differences in serum level of IgA, IgG1, IgG2b, IgG2c, IgG3 and IgM were observed between RenMab™ and wild type mice before and after immunization.

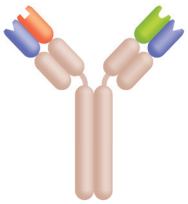
RenLite™

BIOCYTOGEN

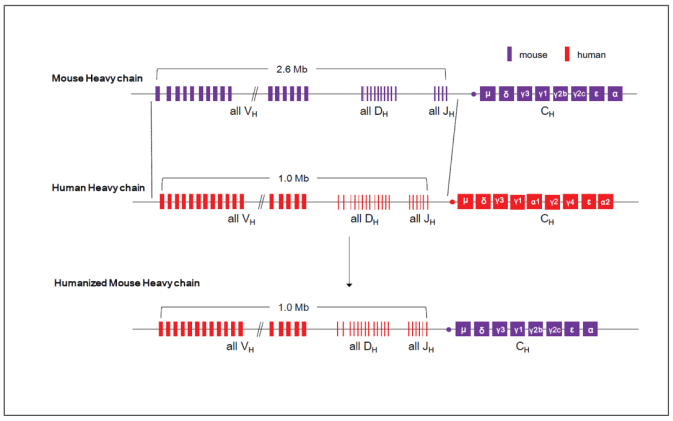
Key Features of RenLite™

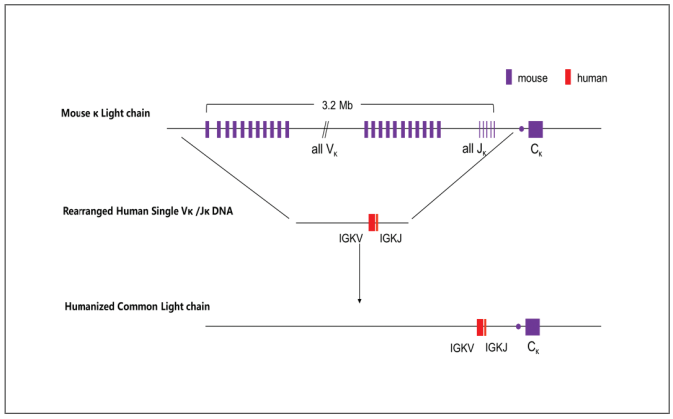
- **Common single human light chain designed for bispecific or multi-specific antibody discovery.**
- **Robust immune response comparable to wild type mouse.**
- **Diversified heavy chain repertoire similar to that of humans.**
- **High binding affinity at subnanomolar range.**

RenLite™



Schematic of humanization in RenLite™ mouse



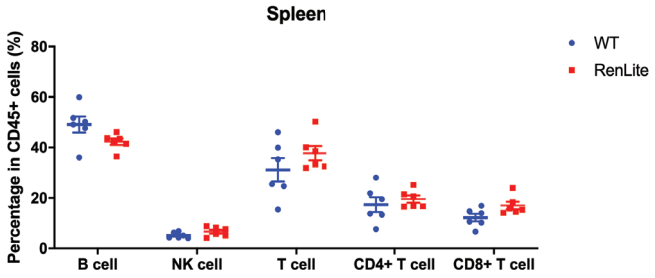


- Heavy chain: whole mouse heavy chain VDJ genes were replaced with full human heavy chain VDJ loci *in situ*.
- Light chain: whole mouse light chain VJ loci was replaced with single human KV and KJ gene *in situ*.

Validation Data

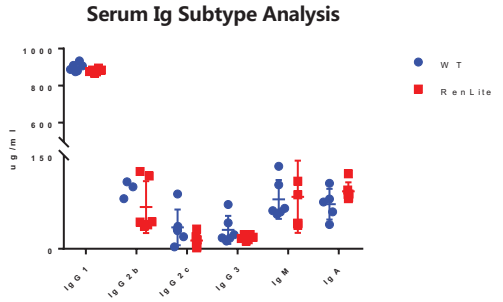
RenLite™ mouse immune cells profiling suggest a comparable immune system with wild type mice

A. Comparison of immune cell population in spleen between RenLite™ and wild type mice.



- The percentage of B cells in the spleen of RenLite™ mice is slightly lower than wild type mice. This is mainly due to the limited light chain choice during the B cell maturation. When the heavy chain does not pair with fixed light chain efficiently, the B cells do not mature properly.

B. Serum immunoglobulin isotype and IgG subtype analysis



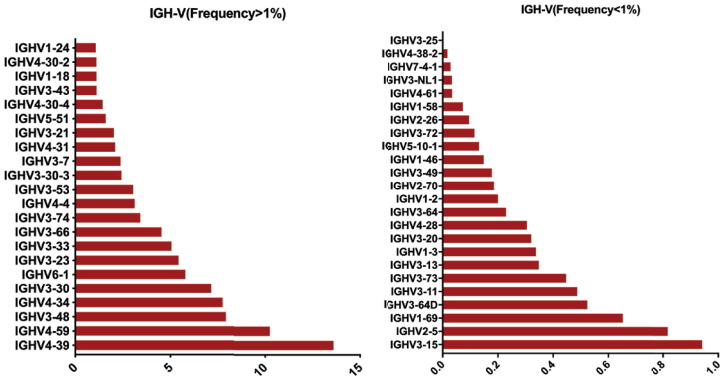
- Serum concentrations of IgA, IgM and IgG subtypes of RenLite™ and wild type mice were measured by ELISA. Sera were equally diluted between two groups of mice.

RenLite™

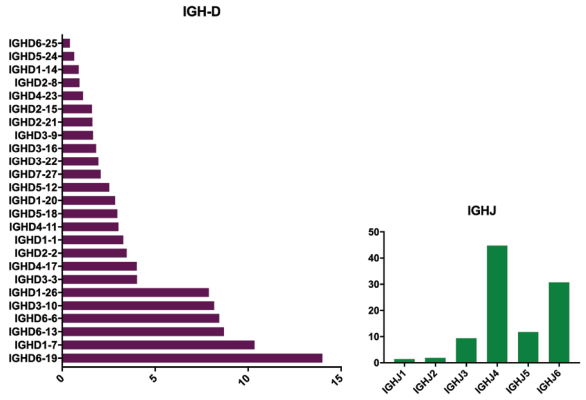
BIOCYTOGEN

Heavy chain IGHV, IGHD, and IGHJ germline usage of naïve RenLite™

A. Heavy Chain IGHV Germline Usage of Naïve RenLite™ Mouse

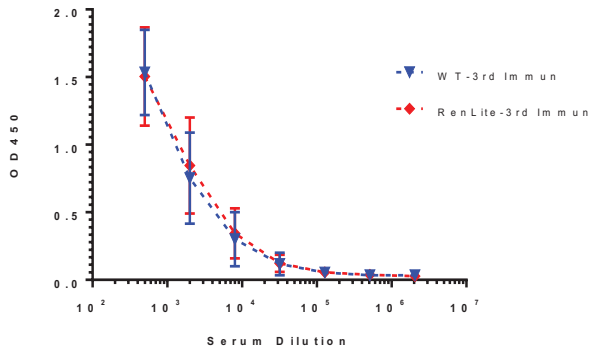


B. Heavy Chain IGHD & IGHJ Germline Usage of Naïve RenLite™ Mouse

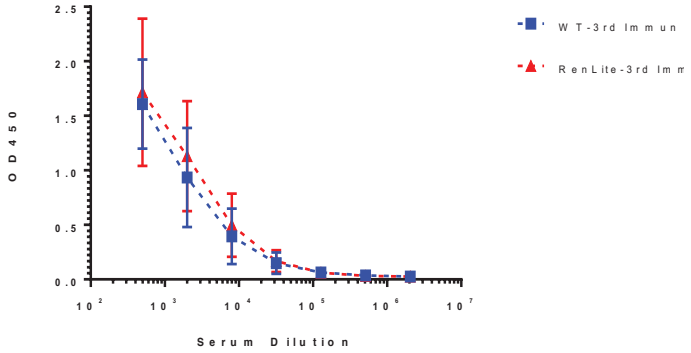


RenLite™ mouse demestrates similar robust immune responses compared to wild type

A.



B.



- Post-third immunization sera titer comparison between RenLite™ mice and wild type mice for two different antigens.

RenMab™ KO LIBRARY

The RenMab™ KO library contains a list of RenMab™ mice each with a specific target gene knocked out. These mice are designed to establish robust immune response and generate antibodies that bind to more epitopes of target protein including conserved domains.

Applications of RenMab™ KO mouse include:

- Antibody discovery against challenging targets such as protein with high homology between human and mouse or GPCR/ion channel proteins.
- Surrogate antibody generation.
- Multiple epitope recognition from the same target protein.

Please visit www.renmab.com for more details.

CONTACT US

50C Audubon Road
Wakefield, MA 01880, USA

781-587-3558

info@biocytogen.com

www.renmab.com

BIOCYTOGEN