



# LakePharma PentaMice™ Platform

## A Proprietary Set of Wildtype Mice Designed to Achieve Maximum Plasma Titers in Hybridoma Campaigns

Conventional immunization approaches utilized in hybridoma-based antibody discovery campaigns typically use one or two common wildtype (WT) mouse strains (e.g. Balb/c or C57Bl/6). This approach likely limits the identification of high-quality antibodies to just those target antigens that are efficiently processed and presented by a restricted major histocompatibility complex (MHC) repertoire.

LakePharma's PentaMice™ Platform is a royalty-free set of mice comprising 5 WT strains that cover 9 distinct MHC haplotypes. A total of 10 mice (2 mice of each strain) are included in each set to achieve maximum plasma titers, thus boosting the opportunity to generate high-quality antibodies *in vivo*.

## Highlights

- Royalty-free platform for *in vivo* immunizations in hybridoma-based antibody discovery campaigns
- Platform consists of 5 WT strains that cover 9 distinct MHC haplotypes
- 10 mice total (2 mice per strain) are included to achieve maximum plasma titers

## The Five Wildtype Strains in the PentaMice Platform - Now with More Autoimmunity!



b x s



d x u



k x g7



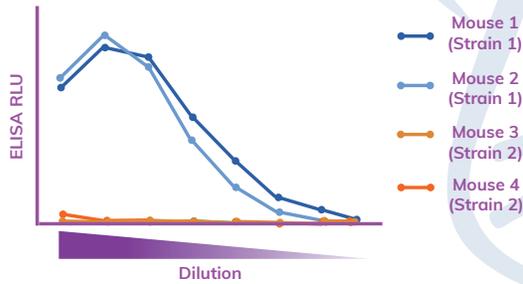
q x v



Mixed

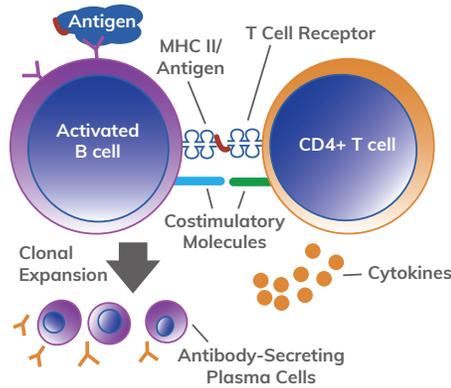
# The Concept Behind the PentaMice Platform

1



Plasma titers are highly predictive of antibody discovery success. Based on LakePharma's experience, there is often a strong strain-dependent difference in plasma titers for most targets.

2



High plasma titers require T cell help, and one of the requirements for effective T cell activation is recognition of cognate antigens presented by the MHC. Only certain peptides are effectively presented by certain MHC.

3

Peptide 1	-	-	-	-	-
Peptide 2	-	-	-	-	-
MHC Class II Haplotype	IA <sup>k</sup> , IA <sup>g7</sup> , IE <sup>k</sup>	IA <sup>d</sup> , IA <sup>a</sup> , IE <sup>d</sup> , IE <sup>a</sup>	IA <sup>b</sup> , IA <sup>s</sup>	IA <sup>v</sup> , IA <sup>q</sup> , IE <sup>v</sup>	IA <sup>mixed</sup> , IE <sup>mixed</sup>
PentaMice Strain	k x g7	d x u	b x s	q x v	Mixed

Two different peptide binding profiles are shown as examples. Peptide 1 is efficiently presented by most MHC II. Peptide 2 is only efficiently presented by IA<sup>g7</sup>.

MHCs are highly polymorphic. LakePharma's scientists hypothesize that this polymorphism drives strain-dependent differences in plasma titers. Hence, the PentaMice Platform is designed to cover a wide range of MHC haplotypes to enable effective T cell help.

For more information, please contact us at [Inquiries@LakePharma.com](mailto:Inquiries@LakePharma.com) or visit [hybridoma.com](http://hybridoma.com).



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