

B6.129P2-Ptrpc^a Igh^{tm1Mnz} /J

Stock No: 007594

 Congenic, Targeted Mutation

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independent proliferative response of B cells that carry high or low affinity receptors. In T cell-dependent responses there is no difference in the ability of B1-8 high vs. B1-8 low affinity cells to enter germinal center reactions. However, high affinity B cells were recruited preferentially in response to both T cell-dependent and T cell-independent antigens.

Donating Investigator

Michel C Nussenzweig, The Rockefeller University

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GENETIC OVERVIEW

Genetic Background

Generation

Igh^{tm1Mnz}

Alele Type

Targeted

Gene Symbol

Igh

Gene Name

immunoglobulin heavy chain complex

Ptpc^a

Alele Type

Not Applicable

Gene Symbol

Ptpc

Gene Name

protein tyrosine phosphatase, receptor type, C

VIEW GENETICS

RESEARCH APPLICATIONS

Immunology, Inflammation and Autoimmunity Research

BASE PRICE

Starting at:

\$2,854.50 Domestic price Cryo Recovery

VIEW PRICE LIST

Details

Detailed Description

Mice homozygous for this targeted mutation are viable and fertile and do not display any gross physical or behavioral abnormalities. In combination with immunoglobulin lambda light chain, this heavy chain variable (V) region produces antibody that binds hapten NP (4-hydroxy-3-nitrophenylacetyl). A Trp to Leu point mutation at codon 33 results in a 40-fold increase in antigen binding affinity (B1-8^{hi}). Despite the significantly enhanced affinity for NP, there is only a 2-3 fold difference in the T-independent proliferative response of B cells that carry high or low affinity receptors. In T cell-dependent responses there is no difference in the ability of B1-8 high vs. B1-8 low affinity cells to enter germinal center reactions. However, high affinity B cells were recruited preferentially in response to both T cell-dependent and T cell-independent antigens. Expression has been verified by immunostaining cells that carry the mutation.

Development

Selected References

Genetics

[+ *Igh*^{tm1Mnz}](#)

[+ *Ptprc*^a](#)

Disease/Phenotype

[+ Disease Terms](#)

[+ Research Areas By Phenotype](#)

[+ Mammalian Phenotype Terms by Genotype](#)

[+ References](#)

[- Technical Support](#)

C O N T A C T T E C H N I C A L S U P P O R T

Genotyping Protocols

Pyrosequencing:[Ptprc](#)

Probe:[Ptprc End Point-Alternate 1](#)

Probe:[Ptprc End Point-Alternate 1](#)

Standard PCR:[Igh](#)

Standard PCR:[PtprcIgh](#)

Standard PCR:[Igh](#)

[Genotyping resources and troubleshooting](#)

Breeding Considerations

When maintained as a live colony, heterozygotes or homozygotes may be bred.

[Additional Breeding and Husbandry Support](#)

Citation

When using the B6.129P2-*Ptprc*^a *Igh*^{tm1Mnz}/J mouse strain in a publication, please [cite the originating article\(s\)](#) and include JAX stock #007594 in your Materials and Methods section.

Animal Health Reports

[Facility Barrier Level Descriptions](#)

Production of mice from cryopreserved embryos or sperm occurs in a maximum barrier room, [G200](#)

[- Pricing & Availability](#)



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Cryorecovery - Domestic Pricing

SERVICE/PRODUCT	DESCRIPTION	PRICE
Cryo Recovery	Homozygous for Ptprc<a> and Heterozygous or wildtype for Igh<tm1Mnz>	\$2,854.50

Related Products and Services

Frozen Mouse Embryo	B6.129P2-Ptprc<a> Igh<tm1Mnz>/J	\$2595.00
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Terms Of Use

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Phone: 207-288-6470

Email: TechTran@jax.org

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