

B6.129-*Dlg4*^{tm1Rlh} /J

Stock No: **013099** | PSD95 null

 Congenic, Targeted Mutation

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in the brain. By approximately the second week of life, a reduction in the synaptic expression of α -amino-3-hydroxy-5-methylisoxazole-4-propionic acid receptors (AMPA receptors), but not N-methyl-D-aspartate receptors (NMDARs) is apparent. This strain may be useful for further characterizing the role of this gene in glutamatergic neurotransmission.

Donating Investigator

Richard L Huganir, Johns Hopkins University School of Medicine

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GENETIC OVERVIEW

Genetic Background Generation

Dlg4^{tm1Rlh}

Alele Type	Gene Symbol	Gene Name
Targeted (Null/Knockout)	<i>Dlg4</i>	discs large MAGUK scaffold protein 4

VIEW GENETICS

RESEARCH APPLICATIONS

Neurobiology Research

VIEW ALL RESEARCH APPLICATIONS

BASE PRICE

Starting at:

\$2,854.50 Domestic price Cryo Recovery

V I E W P R I C E L I S T

Details

Detailed Description

Homozygous *Dlg4* (discs, large homolog 4 (Drosophila); PSD95) targeted mutation mice completely lack protein expression in the brain. No gross anatomical or obvious behavioral abnormalities are apparent in these mice. By approximately the second week of life, a reduction in the synaptic expression of α -amino-3-hydroxy-5-methylisoxazole-4-propionic acid receptors (AMPA receptors), but not N-methyl-D-aspartate receptors (NMDARs) is apparent. AMPAR function is impaired due to an increase in the proportion of synapses that lack functional AMPARs (silent synapses) rather than a general decline in activity. Frequency, but not amplitude, of AMPAR-mediated miniature excitatory postsynaptic currents (EPSCs) is reduced. Decay kinetics of NMDAR-mediated synaptic currents are slower and the magnitude of long-term potentiation (LTP) is greater in homozygotes. This strain may be useful for further characterizing the role of this gene in glutamatergic neurotransmission.

Development

Control Suggestions

Selected References

Genetics

Dlg4^{tm1Rlh}

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

Standard PCR:[Dlg4](#)

[Genotyping resources and troubleshooting](#)

Breeding Considerations

When maintained as a live colony, heterozygotes may be bred. Homozygous animals backcrossed to C57BL/6 (N10) are reportedly smaller than heterozygous and wildtype mice and don't breed well.

[Additional Breeding and Husbandry Support](#)

Citation

When using the PSD95 null mouse strain in a publication, please [cite the originating article\(s\)](#) and include JAX stock #013099 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](#)

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Cryo
Recovery

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CRYORECOVERY - DOMESTIC PRICING

SERVICE/PRODUCT	DESCRIPTION	PRICE
Cryo Recovery	Heterozygous or wildtype for Dlg4	\$2,854.50

RELATED PRODUCTS AND SERVICES

Frozen Mouse Embryo

B6.129-Dlg4<tm1Rlh>/J

\$2595.00

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LICENSING INFORMATION

Phone: 207-288-6470

Email: TechTran@jax.org

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