

B6.Cg-*Pld2*^{tm1.2Gdp}/J
Stock No: **028666** | *Pld2*^{Flox}

◆ Congenic, Targeted Mutation

Typically mice are recovered in 10-14 weeks. Contact Customer Service to place an order or for more information.

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phospholipase D2 gene. Removal of the floxed sequences creates a null allele (see Stock No. [028668](#)). These mice may be useful in studying membrane trafficking, membrane fusion, cancer, neurodegeneration and Alzheimer's disease.

Donating Investigator

Gilbert Di Paolo, Columbia University Medical Center

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GENETIC OVERVIEW

Genetic Background

Generation

Pld2^{tm1.2Gdp}

Alele Type	Gene Symbol	Gene Name
Targeted (Conditional ready (e.g. floxed), No functional change)	<i>Pld2</i>	phospholipase D2

VIEW GENETICS

RESEARCH APPLICATIONS

Cell Biology Research
Immunology, Inflammation and Autoimmunity Research
Research Tools
Neurobiology Research
Metabolism Research
Cancer Research

BASE PRICE

Starting at:

\$2,854.50 Domestic price Cryo Recovery

VIEW PRICE LIST

Details

Detailed Description

Phospholipase D2 (*Pld2*) and its related isoform phospholipase D1 (*Pld1*) hydrolyze phosphatidylcholine to generate bioactive lipid phosphatidic acid (PA), are implicated in membrane trafficking/membrane fusion, and are elevated/up-regulated in various human cancers.

The $Pld2^{Flox}$ allele has *loxP* sites flanking *Pld2* exons 13-15 of the *Pld2* gene. Mice homozygous for $Pld2^{Flox}$ are viable and fertile with no reported abnormalities. Following exposure to Cre recombinase, the floxed sequences (including the catalytic activity-dependent first HKD motif) are deleted in the *cre*-expressing tissues; creating a null allele.

For example, breeding $Pld2^{Flox}$ mice to germline Cre-expressing mice results in the PLD2 global knockout strain: $Pld2^{-/-}$ mice are available as Stock No. [028668](#). Those homozygotes ($Pld2^{-/-}$) are viable and fertile with no reported abnormalities. No protein expression from the knockout allele is detected by western blot analysis of homozygous brain tissue.

Furthermore, $Pld2^{-/-}$ animals may be used to study the protective effect of PLD2-deficiency on Alzheimer's disease. Specifically, when $Pld2^{-/-}$ animals are bred to have a transgene expressing the human *APP* with Familial Alzheimer's Disease Swedish mutations K670N/M671L, the resulting PLD2-deficient APP^{Sw} transgenic mice exhibit reduced Alzheimer's disease characteristics (amyloid-beta-induced synaptic dysfunction and cognitive deficits).

In addition, on a C57BL/6J genetic background, PLD2 ablation does not significantly reduce intestinal tumorigenesis in the Apc^{Min} model (Stock No. [002020](#)). This is contrary to the protective effect observed for PLD1-deficiency in $Apc^{Min/+}$ mice (see Stock No. [028665](#) for description).

Development

Control Suggestions

Selected References

Genetics

[+ *Pld2*^{tm1.2Gdp}](#)

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:[Pld2](#)

[Genotyping resources and troubleshooting](#)

Breeding Considerations

Mice homozygous for [Pld2^{Flox}](#) are viable and fertile with no reported abnormalities. When maintaining a live colony, heterozygous mice may be bred together, to wildtype mice from the colony or to C57BL/6J inbred mice (Stock No. [000664](#)). Alternatively, homozygous mice may be bred together.

[Additional Breeding and Husbandry Support](#)

Citation

When using the [Pld2^{Flox}](#) mouse strain in a publication, please [cite the originating article\(s\)](#) and include JAX stock #028666 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



Cryo
Recovery

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Domestic | International

Pricing effective for USA, Canada and Mexico shipping destinations

CRYORECOVERY - DOMESTIC PRICING

SERVICE/PRODUCT	DESCRIPTION	PRICE
Cryo Recovery	Heterozygous or wildtype for Pld2<tm1.2Gdp>	\$2,854.50

RELATED PRODUCTS AND SERVICES

Frozen Mouse Embryo	B6.Cg-Pld2<tm1.2Gdp>/J	\$2595.00
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LICENSING INFORMATION

Phone: 207-288-6470

Email: TechTran@jax.org

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By Allele

By Gene

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