

B6.129-*Pdk2*^{tm1Rhar} /J

Stock No: **025634**

 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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Donating Investigator

Robert A. Harris, Indiana University School of Medicine

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GENETIC OVERVIEW

Genetic Background

Generation

Pdk2^{tm1Rhar}

Alele Type

Targeted (Null/Knockout)

Gene Symbol

Pdk2

Gene Name

pyruvate dehydrogenase kinase, isoenzyme 2

VIEW GENETICS

RESEARCH APPLICATIONS

Metabolism Research

Research Tools

VIEW ALL RESEARCH APPLICATIONS

BASE PRICE

Starting at:

Details

Detailed Description

The predominantly expressed pyruvate dehydrogenase kinase isoform in skeletal muscle, isoenzyme 2, is encoded by the *Pdk2* gene. Located in the mitochondrial matrix, pyruvate dehydrogenase kinase, isoenzyme 2, inhibits the pyruvate dehydrogenase complex, and is involved in glucose metabolism regulation. These mice carry a knock out targeted mutation of the *Pdk2* gene in which exon 1 and part of exon 2 are replaced by a PGK-NEO cassette. Mice that are homozygous for the targeted mutation are viable and fertile. No gene product (protein) is detected by Western blot analysis of mitochondria isolated from muscle tissue from homozygous animals. Homozygotes exhibit higher pyruvate dehydrogenase complex activity, and reduced non-fasting blood glucose levels when compared to wildtype controls.

When crossed with *Pdk4* knock out mice (Stock No. [025633](#)), the resulting double homozygotes exhibit lower blood glucose levels, fasting induced ketoacidosis and hypothermia, and increased pyruvate dehydrogenase complex activity.

Development

Control Suggestions

Selected References

Genetics

Pdk2^{tm1Rhar}

Disease/Phenotype

Disease Terms

Research Areas By Phenotype

– 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:[Pdk2](#)

[Genotyping resources and troubleshooting](#)

Breeding Considerations

When maintaining a live colony, these mice can be bred as homozygotes.

[Additional Breeding and Husbandry Support](#)

Citation

When using the B6.129-*Pdk2*^{tm1Rhar}/J mouse strain in a publication, please [cite the originating article\(s\)](#) and include JAX stock #025634 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

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

Domestic **International**

Pricing effective for USA, Canada and Mexico shipping destinations

Domestic Pricing for

- Commercial & For-Profit
- Not-For-Profit & Academic

CRYORECOVERY - DOMESTIC PRICING

SERVICE/PRODUCT	DESCRIPTION	PRICE
Cryo Recovery	Heterozygous for Pdk2<tm1Rhar>	\$2,854.50

PAYMENT TERMS AND CONDITIONS

Terms are granted by individual review and stated on the customer invoice(s) and account statement. These transactions are payable in U.S. currency within the granted terms. Payment for services, products, shipping containers, and shipping costs that are rendered are expected within the payment terms indicated on the invoice or stated by contract. Invoices and account balances in arrears of stated terms may result in The Jackson Laboratory pursuing collection activities including but not limited to outside agencies and court filings.

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The Jackson Laboratory has rigorous genetic quality control and mutant gene genotyping programs to ensure the genetic background of JAX® Mice strains as well as the genotypes of strains with identified molecular mutations. JAX® Mice strains are only made available to researchers after meeting our standards. However, the phenotype of each strain may not be fully characterized and/or captured in the strain data sheets. **Therefore, we cannot guarantee a strain's phenotype will meet all expectations.** To ensure that JAX® Mice will meet the needs of individual research projects or when requesting a strain that is new to your research, we suggest ordering and performing tests on a small number of mice to determine suitability for your particular project. We do not guarantee [breeding performance](#) and therefore suggest that investigators order more than one breeding pair to avoid delays in their research.

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ADDITIONAL USE RESTRICTIONS APPLY

[Use of MICE by companies or for-profit entities requires a no-fee JAX Leap License prior to shipping.](#)

LICENSING INFORMATION

Phone: 207-288-6470

Email: TechTran@jax.org

Related Strains

All

By Allele

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