

STOCK *Eif2ak3*^{tm1.2Drc} /J
Stock No: 023066 | PERK^{loxP}

Targeted Mutation

Live mice available in varying quantities. Ask Customer Service for details.

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related to the study of protein synthesis regulation in secretory organs, as well as Wolcott-Rallison syndrome and Alzheimer's disease.

Donating Investigator

Douglas Cavener, Penn State University

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GENETIC OVERVIEW

Genetic Background

Generation

N10+pN1F19
(2021-01-11 00:00:00)

Eif2ak3^{tm1.2Drc}

Alele Type

Targeted (Conditional ready
(e.g. floxed), No functional
change)

Gene Symbol

Eif2ak3

Gene Name

eukaryotic translation initiation factor 2 alpha kinase 3

VIEW GENETICS

RESEARCH APPLICATIONS

Internal/Organ Research

Diabetes and Obesity Research

Research Tools

Cell Biology Research

Developmental Biology Research

BASE PRICE

Starting at:

\$278.00 Domestic price for female

VIEW PRICE LIST

Details

Detailed Description

These *Perk*^{loxP/loxP} mutant mice possess *loxP* sites flanking exons 7-9 of the eukaryotic translation initiation factor 2 alpha kinase 3 (*Eif2ak3*) gene. PERK is an endoplasmic reticulum (ER) transmembrane protein, expressed mainly in secretory and endocrine organs such as the pancreas. Mutations in PERK have been implicated in the onset of Wolcott-Rallison syndrome which is characterized by early onset of insulin-dependent diabetes, dwarfism, and skeletal dysplasias. Mice that are homozygous for this allele are viable and fertile. When these mutant mice are bred to mice that express Cre recombinase, resulting double mutant offspring will have exons 7-9 deleted in *cre*-expressing tissues.

For example, when crossed to B6.FVB-Tg(Ella-cre)C5379Lmgd/J mice (Stock No. [003724](#)), resulting *Perk*^{-/-} mice exhibit permanent neonatal diabetes, exocrine pancreas atrophy, growth retardation, severe osteopenia, skeletal dysplasia, recurrent hepatitis, and behavior/neurological dysfunctions.

Development

Control Suggestions

Selected References

Genetics

Eif2ak3^{tm1.2Drc}

⊖ 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:[Eif2ak3](#)

[Genotyping resources and troubleshooting](#)

Dietary Information

LabDiet® 5K52 formulation (6% fat)

Breeding Considerations

When maintaining a live colony mice homozygous for the floxed allele may be bred together.

[Additional Breeding and Husbandry Support](#)

Mating System

Homozygote x Homozygote

Citation

When using the PERK^{loxP} mouse strain in a publication, please [cite the originating article\(s\)](#) and include JAX stock #023066 in your Materials and Methods section.

Animal Health Reports

[Facility Barrier Level Descriptions](#)

 [FGB29 \(Standard\)](#)

⊖ Pricing & Availability



Live mice available in varying quantities. Ask Customer Service for details.

Available

Domestic International

Pricing effective for USA, Canada and Mexico shipping destinations

LIVE MOUSE

AGE	SEX	GENOTYPE	PRICE
Approx 4-8 weeks	Female	Homozygous for Eif2ak3 ^{tm1.2Drc}	\$278.00
	Male	Homozygous for Eif2ak3 ^{tm1.2Drc}	\$278.00

RELATED PRODUCTS AND SERVICES

Frozen Mouse Embryo	STOCK Eif2ak3 ^{tm1.2Drc} /J Frozen Embryo	\$2595.00
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