

STOCK *Arg2^{tm1Weo}* /J

Stock No: 020286

 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

Ruth Caldwell, Georgia Health Sciences University

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GENETIC OVERVIEW

Genetic Background

Generation

Arg2^{tm1Weo}

Allele Type

Targeted (Null/Knockout)

Gene Symbol

Arg2

Gene Name

arginase type II

VIEW GENETICS

RESEARCH APPLICATIONS

Neurobiology Research

Sensorineural Research

Metabolism Research

Cardiovascular 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

ARG2 (arginase type II) protein, found in mitochondria, catalyzes the hydrolysis of arginine to ornithine and urea. It is widely distributed, but most highly expressed in the prostate and kidney.

This strain carries a targeted mutation of *Arg2*. Homozygous mutant mice exhibit hyperargininemia but are normal with respect to several related amino acids (Cit, Orn, Pro). When treated with streptozotocin to induce diabetes, homozygotes show less stiffening of the carotid artery than wildtype diabetic mice. In a model of retinopathy of prematurity (ROP) that employs Oxygen-Induced Retinopathy (OIR), homozygous mutant mice show reduced neuro-glial injury and improved retinal function. Neuronal survival and function are significantly improved and there's an inhibition of retinal thinning, preservation of rod bipolar cells and prevention of glial activation in retinas.

While homozygous mice are viable and generally fertile, it should be noted that unpublished studies suggest that there may be diminished fertility in homozygous males. Functional inactivation of the gene was confirmed by assaying the enzyme in the kidney, but Northern blotting of mRNA reveals the presence of a band similar in both intensity and size to the normal gene product. This strain may be useful in applications related to the study of arginine homeostasis, vascular dysfunction, and neurodegeneration associated with retinopathy of prematurity.

Development

Expression Data

Control Suggestions

Selected References

Genetics

Arg2^{tm1Weo}

⊖ 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

Separated PCR:[Arg2alternate1](#)

[Genotyping resources and troubleshooting](#)

Breeding Considerations

Heterozygotes and homozygotes are viable and fertile. Unpublished studies suggest that there may be diminished fertility in homozygous males.

[Additional Breeding and Husbandry Support](#)

Mating System

Homozygote x Homozygote

Citation

When using the STOCK *Arg2^{tm1Weo}/J* mouse strain in a publication, please [cite the originating article\(s\)](#) and include JAX stock #020286 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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DomesticInternational

Pricing effective for USA, Canada and Mexico shipping destinations

CRYORECOVERY - DOMESTIC PRICING

SERVICE/PRODUCT	DESCRIPTION	PRICE
Cryo Recovery	Heterozygous or wildtype for Arg2<tm1Weo>	\$2,854.50

RELATED PRODUCTS AND SERVICES

Frozen Mouse Embryo	STOCK Arg2<tm1Weo>/J Frozen Embryo	\$2595.00
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PAYMENT TERMS AND CONDITIONS

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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.

Terms Of Use

TERMS OF USE

[General Terms and Conditions](#)

QUESTIONS ABOUT TERMS OF USE

ADDITIONAL USE RESTRICTIONS APPLY

[Use of MICE by companies or for-profit entities requires a license prior to shipping.](#)

LICENSING INFORMATION

☰ Related Strains

- All
- By Allele
- By Gene
- By Collection




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