

STOCK *Cdc42^{tm1Yizh}* / J
Stock No: 027576 | *Cdc42^{loxP}*

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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progression.

Donating Investigator

Yi Zheng, Cincinnati Children's Hospital Medical Center

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GENETIC OVERVIEW

Genetic Background

Generation

Cdc42^{tm1Yizh}

Alele Type

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

Gene Symbol

Cdc42

Gene Name

cell division cycle 42

VIEW GENETICS

RESEARCH APPLICATIONS

Cell Biology Research

Research Tools

Cancer 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

Cdc42^{loxP/loxP} floxed mice possess *loxP* sites flanking exon 2 of the cell division cycle 42 (*Cdc42*) gene. CDC42 is a Rho-family GTPase that controls cadherin-based intercellular junctions and cell polarity, as well as cellular adhesion, migration, endocytosis, and cell cycle progression. Homozygotes are viable and fertile. When bred to mice that express tissue-specific Cre recombinase, resulting offspring will have exon 2 deleted in the *cre*-expressing tissues.

For example, when bred to B6.Cg-Tg(Mx1-cre)1Cgn/J transgenic mice (Stock No. [003556](#)) expressing Cre recombinase in hematopoietic stem cells (HSCs) after administration of poly(IC), CDC42 is undetectable in bone marrow (BM) five days after administration of the third poly(IC) dose. These mice show increased number and frequency of the stem/progenitor cells in the BM. *Cdc42* deficiency also causes impaired adhesion, homing, lodging, and retention of HSCs, leading to massive egress of HSCs from BM to distal organs and peripheral blood and to an engraftment failure.

Development

Control Suggestions

Selected References

Genetics

Cdc42^{tm1Yizh}

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:[Cdc42](#)

[Genotyping resources and troubleshooting](#)

Breeding Considerations

When maintaining a live colony, homozygous mice may be bred together.

[Additional Breeding and Husbandry Support](#)

Mating System

Homozygote x Homozygote

Citation

When using the $Cdc42^{loxP}$ mouse strain in a publication, please [cite the originating article\(s\)](#) and include JAX stock #027576 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

CRYORECOVERY - DOMESTIC PRICING

SERVICE/PRODUCT	DESCRIPTION	PRICE
Cryo Recovery	Heterozygous or wildtype for Cdc42<tm1Yizh>	\$2,854.50

RELATED PRODUCTS AND SERVICES

Frozen Mouse Embryo	STOCK Cdc42<tm1Yizh>/J	\$2595.00
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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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Email: TechTran@jax.org

Related Strains

All

By Allele

By Gene

By Collection



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Yes No