

B6.129S4-Tfrc^{tm1Nca}/J

Stock No: **018387**

 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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system development.

Donating Investigator

Nancy C. Andrews, Duke University School of Medicine

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GENETIC OVERVIEW

Genetic Background

Generation

Tfrc^{tm1Nca}

Alele Type

Gene Symbol

Gene Name

Targeted (Null/Knockout)

Tfrc

transferrin receptor

VIEW GENETICS

RESEARCH APPLICATIONS

Hematological Research

Developmental Biology Research

Internal/Organ 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

The transferrin receptor is essential to cellular uptake of iron via endocytosis, and has a critical role in erythropoiesis and nervous system development. These mice carry a targeted mutation of the *Tfrc*, transferrin receptor, gene, in which a NEO cassette replaces exons 3 through 5. Mice that are heterozygous for the targeted mutation are viable and fertile. Homozygous null mice have an embryonic lethal phenotype, failing to develop past embryonic day 12.5, and exhibit severe anemia with hydrops fetalis, hypoxia, kinked neural tubes and pericardial effusions. Heterozygotes on the 129S6/SvEvTac background have decreased total body iron levels, erythroid microcytosis and hypochromia. Mutants on the 129S6/SvEvTac background have a compensatory increase in erythrocyte cell number that compensates for defective erythropoiesis and results in normal hematocrits and hemoglobin levels.

The Donating Investigator reports preliminary phenotyping data that indicate heterozygotes on the C57BL/6J background display a compensatory increase in erythrocyte number, and that this increase may be insufficient to raise hemoglobin and hemocrit to normal levels.

In an attempt to offer alleles on well-characterized or multiple genetic backgrounds, alleles are frequently moved to a genetic background different from that on which an allele was first characterized. This is the case for the strain above. It should be noted that the phenotype could vary from that originally described. We will modify the strain description if necessary as published results become available.

Development

Control Suggestions

Selected References

Genetics

Tfrc^{tm1Nca}

– 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 MCA: [Tfrc](#)

Separated PCR: [Tfrc](#)

[Genotyping resources and troubleshooting](#)

Breeding Considerations

When maintaining a live colony, these mice can be bred as heterozygotes. Homozygous null mice have an embryonic lethal phenotype, failing to develop past embryonic day 12.5.

[Additional Breeding and Husbandry Support](#)

Mating System

Wild-type x Heterozygote

Heterozygote x Wild-type

Citation

When using the B6.129S4-*Tfrc*^{tm1Nca}/J mouse strain in a publication, please [cite the originating article\(s\)](#) and include JAX stock #018387 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



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 Tfr<tm1Nca>	\$2,854.50

RELATED PRODUCTS AND SERVICES

Frozen Mouse Embryo	B6.129S4-Tfr<tm1Nca>/J Frozen Embryo	\$2595.00
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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.

THE JACKSON LABORATORY'S GENOTYPE PROMISE

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 license prior to shipping.](#)

LICENSING INFORMATION

☰ Related Strains

- All
- By Allele
- By Gene
- By Collection




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