

B6.129S6-Nr1h3^{tm1Djm}/J

Stock No: **013761** | LXR α (-)

 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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involving fertility, innate immunity, metabolism, and the effects of dietary cholesterol, lipids and carbohydrates.

Donating Investigator

David Mangelsdorf, UT Southwestern Medical Center

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GENETIC OVERVIEW

Genetic Background

Generation

Nr1h3^{tm1Djm}

Alele Type

Gene Symbol

Gene Name

Targeted (Null/Knockout)

Nr1h3

nuclear receptor subfamily 1, group H, member 3

VIEW GENETICS

RESEARCH APPLICATIONS

Cardiovascular Research

Reproductive Biology Research

Metabolism Research

Internal/Organ Research

Immunology, Inflammation and Autoimmunity 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

Homozygous *Nr1h3* (nuclear receptor subfamily 1, group H, member 3) targeted mutation mice lose their ability to respond normally to dietary cholesterol. Mice maintained on cholesterol diets fail to induce transcription of the *Cyp7a1* (cytochrome P450, family 7, subfamily a, polypeptide 1) gene, a rate-limiting enzyme in bile acid synthesis, and fail to induce expression of ABCG5 (ATP-binding cassette, sub-family G (WHITE), member 5) and ABCG8 (ATP-binding cassette, sub-family G (WHITE), member 8), ATP-binding cassette transporters that are required for cholesterol secretion into bile. Large amounts of cholesterol rapidly accumulate in the liver leading to impaired hepatic function. Impaired reverse cholesterol transport from peripheral tissues is also observed. The ability to regulate lipids and carbohydrates is also lost. Defects in innate immune responses by activated macrophages have also been described. Males are not infertile, but show a significantly higher number of testicular apoptotic cells than wildtype mice. Testosterone production is significantly lower. It is not known whether genetic background affects the phenotype associated with this mutation.

Development

Control Suggestions

Selected References

Genetics

Nr1h3^{tm1Djm}

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:[Nr1h3](#)

[Genotyping resources and troubleshooting](#)

Breeding Considerations

When maintained as a live colony, homozygotes or heterozygotes may be bred. The donating laboratory reports that breeders between the ages of 2 and 6 months of age show best productivity. They also recommend Teklad Global diets which are free of soybeans for experimental purposes. Soybeans are suspected of masking adrenal and neurodegenerative phenotypes associated with compound mutant strains that incorporate this *Nr1h3* mutation (please review published literature). Our "Diet Information" link provides further details of the maintenance feed used at The Jackson Laboratory.

[Additional Breeding and Husbandry Support](#)

Citation

When using the LXR α (-) mouse strain in a publication, please [cite the originating article\(s\)](#) and include JAX stock #013761 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 for Nr1h3<tm1Djm>	\$2,854.50

RELATED PRODUCTS AND SERVICES

Frozen Mouse Embryo	B6.129S6-Nr1h3<tm1Djm>/J Frozen Embryo	\$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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Q U E S T I O N S A B O U T T E R M S O F U S E

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LICENSING INFORMATION

Phone: 207-288-6470

Email: TechTran@jax.org

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All

By Allele

By Gene

By Collection



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