

## STOCK *Nr2e3*<sup>rd7</sup> /J

Stock No: **002139** | retinal degeneration 7

 Spontaneous Mutation

Typically mice are recovered in 10-14 weeks. Contact Customer Service to place an order or for more information.

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## GENETIC OVERVIEW

Genetic Background

Generation

*Nr2e3*<sup>rd7</sup>

**Alele Type**

Spontaneous  
(Null/Knockout)

**Gene Symbol**

*Nr2e3*

**Gene Name**

nuclear receptor subfamily 2, group E, member 3

VIEW GENETICS

## RESEARCH APPLICATIONS

Sensorineural Research

VIEW ALL RESEARCH APPLICATIONS

## BASE PRICE

Starting at:

\$2,854.50 Domestic price Cryo Recovery

## Details

### Detailed Description

*Nr2e3* is a retinal transcription factor important in the developmental pathways of photoreceptor cells. In mice homozygous for *Nr2e3*<sup>rd7</sup>, evenly distributed white spots cover the retina and have been detected by Fundus examination as early as 16.5 days of age. Whorls and rosettes in the outer nuclear layer can first be detected at 12.5 days of age, before the eyes open. These whorls likely underlie the appearance of the white spots on the retina and the white spots and whorls are both present at one month of age then are reduced in number by 5 months, and disappear by 16 months. Electroretinographs give normal signals until 5 months of age when both rod and cone signals begin to show a progressive reduction. Attenuated retinal vessels and mottled pigment are found by 16 months of age, and the outer nuclear layer is only half normal thickness subsequent to progressive loss of cones and rods. Immunohistochemical assessment revealed that the whorls are filled with and surrounded by cone cells and there is an increase in the percentage of blue opsin expressing cone cells. Thus, NR2E3 regulates photoreceptor cell differentiation. Enhanced S-cone syndrome has been associated with mutations in human NR2E3 and mice homozygous for the *Nr2e3*<sup>rd7</sup> mutation offer a model for this disease. (Chang et al., 1998; Akhmedov et al., 2000; Haider et al., 2000 and 2001.)

### Development

### Control Suggestions

## Genetics

### *Nr2e3*<sup>rd7</sup>

## Disease/Phenotype

### Disease Terms

### Research Areas By Phenotype

### Mammalian Phenotype Terms by Genotype

### References

## Technical Support

### CONTACT TECHNICAL SUPPORT

#### Genotyping Protocols

Separated PCR:[Nr2e3 Alternate1](#)

[Genotyping resources and troubleshooting](#)

#### Breeding Considerations

While maintaining a live colony, these mice are bred as a homozygote x homozygote mating. Technician notes indicated that homozygotes may be poor breeders.

[Additional Breeding and Husbandry Support](#)

#### Citation

When using the retinal degeneration 7 mouse strain in a publication, please [cite the originating article\(s\)](#) and include JAX stock #002139 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
<a href="#">Cryo Recovery</a>	Homozygous for Nr2e3<rd7>, 1 pair minimum	\$2,854.50

## PAYMENT TERMS AND CONDITIONS

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.

### Terms Of Use

#### TERMS OF USE

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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

#### LICENSING INFORMATION

Phone: 207-288-6470

Email: [TechTran@jax.org](mailto:TechTran@jax.org)

### Related Strains

All

By Allele

By Gene

By Collection






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