

B6.129S-*Atoh1*^{tm5.1(Cre/PGR)Hzo} /J

Stock No: **013594**

 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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Donating Investigator

Huda Zoghbi, Baylor College of Medicine

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GENETIC OVERVIEW

Genetic Background

Generation

Atoh1^{tm5.1(cre/PGR)Hzo}

Alele Type

Targeted (Recombinase-expressing, Inducible)

Gene Symbol

Atoh1

Gene Name

atonal bHLH transcription factor 1

VIEW GENETICS

RESEARCH APPLICATIONS

Neurobiology Research

Developmental Biology Research

Research Tools

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

A targeting vector was designed to replace the coding sequence of the atonal homolog 1 (*Atoh1*) gene with a modified Cre-recombinase-progesterone receptor fusion protein (Cre-PR), abolishing gene function. Homozygous *Math1*^{Cre*PR} mice die before birth due to central respiratory failure. Heterozygous mice are viable, fertile, and normal in size. The *Math1*^{Cre*PR/+} allele has expression of the Cre*PR fusion protein under control of the *Math1* promoter/enhancer elements. Cre*PR fusion gene activity is inducible; observed only 6-12 hours after administration of RU486, a competitive progesterone receptor antagonist. As such, when *Math1*^{Cre*PR/+} mice are bred with mice containing *loxP*-flanked sequence, RU486-inducible Cre-mediated recombination will result in deletion of the floxed sequences in the *Math1*-expressing cells of the offspring. As such *Math1* is expressed in the hindbrain, specifically in the conscious proprioceptive nuclei of the cortex at E10.5, and in most unconscious proprioceptive lineages in the cerebellum at E12.5-E14.5. These mutant mice are useful for the studying the characterization and time of formation of *Math1*-expressing cell lineages, as well as genetic and developmental links between proprioception, interoception, hearing, and arousal.

Development

Expression Data

Control Suggestions

Selected References

Genetics

Atoh1^{tm5.1(cre/PGR)Hzo}

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:[Atoh1](#)

[Genotyping resources and troubleshooting](#)

Breeding Considerations

When maintaining a live colony, heterozygous mice may be bred to wildtype mice from the colony or C57BL/6J inbred mice (Stock No. [000664](#)).

[Additional Breeding and Husbandry Support](#)

Citation

When using the B6.129S-*Atoh1*^{tm5.1(Cre/PGR)Hzo}/J mouse strain in a publication, please [cite the originating article\(s\)](#) and include JAX stock #013594 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](#)

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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 Atoh1<tm5.1(Cre/PGR)Hzo>	\$2,854.50

RELATED PRODUCTS AND SERVICES

Frozen Mouse Embryo	B6.129S-Atoh1<tm5.1(Cre/PGR)Hzo>/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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