

STOCK *Snta1^{tm1Scf}* /J

Stock No: 012940 | α -Syn

 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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utrophin, acetylcholine receptor, and acetylcholinesterase at neuromuscular junctions.

Donating Investigator

Stanley C Froehner, University of Washington

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GENETIC OVERVIEW

Genetic Background

Generation

Snta1^{tm1Scf}

Alele Type

Gene Symbol

Gene Name

Targeted (Null/Knockout)

Snta1

syntrophin, acidic 1

VIEW GENETICS

RESEARCH APPLICATIONS

Developmental Biology Research

Neurobiology 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

In this strain, exon 1 of the endogenous mouse syntrophin, acidic 1 (*Snta1*) gene is replaced with a neo cassette abolishing gene function. Mice homozygous for the *Snta1* allele are viable and fertile. Homozygotes tend to be small at 3 weeks of age and the Donating Investigator reports weaning the mice at 4 weeks. Neuromuscular junctions in homozygous *Snta1*^{-/-} mice have undetectable levels of postsynaptic utrophin, reduced levels of acetylcholine receptor and acetylcholinesterase, shallow nerve gutters, abnormal distributions of acetylcholine receptors, and postjunctional folds that are generally less organized and have fewer openings to the synaptic cleft than controls. *Snta1*^{-/-} mice also exhibit a mislocalization of the water channel aquaporin-4 (AQP4) at the blood-brain barrier leading to reduced edema and infarct volume in brain trauma models, and reduced K⁺ clearance from the neuropil leading to increased seizure and stroke susceptibility. These mice may be useful for studying synapse formation and maintenance, and the organization of utrophin, acetylcholine receptor, and acetylcholinesterase at neuromuscular junctions, and water homeostasis in the brain.

Development

Expression Data

Control Suggestions

Selected References

Genetics

Snta1^{tm1Scf}

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 PCR:[Snta1](#)

[Genotyping resources and troubleshooting](#)

Breeding Considerations

When maintaining a live colony, homozygous mice may be bred. The Donating Investigator states that mice are small at 3 weeks and waits to wean them at 4 weeks of age.

[Additional Breeding and Husbandry Support](#)

Citation

When using the α -Syn⁻ mouse strain in a publication, please [cite the originating article\(s\)](#) and include JAX stock #012940 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 Snta1<tm1Scf>	\$2,854.50

RELATED PRODUCTS AND SERVICES		
Frozen Mouse Embryo	STOCK Snta1<tm1Scf>/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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Q U E S T I O N S A B O U T T E R M S O F U S E

ADDITIONAL USE RESTRICTIONS APPLY

[Use of MICE by companies or for-profit entities requires a license prior to shipping.](#)

LICENSING INFORMATION

Phone: 207-288-6470

Email: TechTran@jax.org

Related Strains

All

By Allele

By Gene

By Collection



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