

## B6.129(SJL)-Scn4b<sup>tm1.1Geh</sup>/RahJ

Stock No: 027530 | Scn4b floxed

 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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channels.

### Donating Investigator

Gregg E Homanics, University of Pittsburgh

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## GENETIC OVERVIEW

Genetic Background

Generation

### Scn4b<sup>tm1.1Geh</sup>

#### Alele Type

Targeted (Conditional ready (e.g. floxed), No functional change)

#### Gene Symbol

Scn4b

#### Gene Name

sodium channel, type IV, beta

VIEW GENETICS

## RESEARCH APPLICATIONS

Neurobiology Research

Research Tools

Developmental Biology 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

*Scn4b* floxed mice possess *loxP* sites flanking exon 2 of the sodium channel, type IV, beta (*Scn4b*) gene. SCN4B encodes a sodium channel beta subunit, expressed in the dorsal and ventral striatum, that interacts with voltage-gated alpha subunits to alter the gating properties of sodium channels. Mice that are homozygous for this allele are viable and fertile.

When bred to mice that express tissue-specific Cre recombinase, resulting offspring will have exon 2 deleted in the *cre*-expressing tissues.

For example, when bred to B6.FVB-Tg(Ella-cre)C5379Lmgd/J (Stock No. [003724](#)) expressing germline Cre Recombinase, resulting *Scn4b* KO offspring show a reduction of spike-timing-dependent long-term depression (tLTD) in medium spiny neurons (MSNs), with no effect on long-term potentiation (tLTP). These changes in action potential reduce the ability of backpropagating action potentials to evoke calcium signals in dendrites of MSNs.

#### Development

#### Control Suggestions

#### Selected References

### Genetics

#### *Scn4b*<sup>tm1.1Geh</sup>

### 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:[Scn4b-Alternate 1](#)

[Genotyping resources and troubleshooting](#)

#### Breeding Considerations

When maintaining a live colony, homozygous mice may be bred together.

[Additional Breeding and Husbandry Support](#)

#### Citation

When using the Scn4b floxed mouse strain in a publication, please [cite the originating article\(s\)](#) and include JAX stock #027530 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.

## DomesticInternational

Pricing effective for USA, Canada and Mexico shipping destinations

### CRYORECOVERY - DOMESTIC PRICING

SERVICE/PRODUCT

DESCRIPTION

PRICE

## PAYMENT TERMS AND CONDITIONS

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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.

### 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

#### 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](mailto:TechTran@jax.org)

### Related Strains

All

By Allele

By Gene

By Collection



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