Overview

Also Known As: Flox-EAAT2

These Flox-EAAT2 mice possess loxP sites flanking exons 3 and 4 of the Slc1a2 gene. This strain may be useful for generating conditional mutations in applications related to the regulation of excitatory glutamate neurotransmission, and the glutamate-glutamine cycle.
Donating Investigator

Niels Christian Danbolt, University of Oslo

GENETIC OVERVIEW

<table>
<thead>
<tr>
<th>Genetic Background</th>
<th>Generation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Slc1a2&lt;sup&gt;tm1.1Ncd&lt;/sup&gt;</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Allele Type</th>
<th>Gene Symbol</th>
<th>Gene Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Targeted (Conditional ready (e.g. floxed), No functional change)</td>
<td>Slc1a2</td>
<td>solute carrier family 1 (glial high affinity glutamate transporter), member 2</td>
</tr>
</tbody>
</table>

VIEW GENETICS

RESEARCH APPLICATIONS

Cell Biology Research
Neurobiology Research
Research Tools

VIEW ALL RESEARCH APPLICATIONS

BASE PRICE

Starting at:

$2,595.00 Domestic price Cryo Recovery

VIEW PRICE LIST

Details

Detailed Description

The Slc1a2 gene encodes an excitatory glutamate transporter (EAAT2; GLT-1) that is responsible for almost all of the total glutamate uptake activity in the forebrain. EAAT2 removes glutamate from the extracellular spaces (both inside and outside of the synapses) and thereby protects neurons against harmful activation of glutamate receptors. Perturbations in EAAT2 functioning have been associated with a number of neurological disorders including amyotrophic lateral sclerosis. In the brain, EAAT2 is predominantly expressed on astrocytes, but is also found on axon-terminals. These mice possess loxP sites on either side of exons 3 and 4 of the targeted gene. Mice that are homozygous for this allele are viable and fertile. When these mutant mice are bred to mice that express Cre recombinase, resulting offspring will have exons 3 and 4
deleted in the cre-expressing tissues.

When bred to a strain with Cre recombinase expression in developing neuronal tissues (see Stock No. 003771 for example), the resulting mutant mice exhibit spontaneous seizures, hyperactivity and premature death.

Genetic Information

**Slc1a2**

**Disease/Phenotype**

**Disease Terms**

**Research Areas By Genotype**

**Mammalian Phenotype Terms by Genotype**

**References**

**Technical Support**

**Genotyping Protocols**

Standard PCR: **Slc1a2**

Genotyping resources and troubleshooting

**Breeding Considerations**

When maintaining a live colony, these mice can be bred as homozygotes.

**Additional Breeding and Husbandry Support**

**Citation**

When using the Flex EAAT2 mouse strain in a publication, please cite the originating article(s) and include JAX stock #026619 in your

**Animal Health Reports**

Production of mice from cryopreserved embryos or sperm occurs in a maximum barrier room, G200
Typically mice are recovered in 10-14 weeks. Contact Customer Service to place an order or for more information.

<table>
<thead>
<tr>
<th>SERVICE</th>
<th>GENOTYPE</th>
<th>PRICE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cryo Recovery</td>
<td>Heterozygous or wildtype for S1c1a2&lt;tm1.1Ncd&gt;</td>
<td>$2,595.00</td>
</tr>
</tbody>
</table>

We will fulfill your order by providing at least two carriers for each strain ordered. The total number, sex, and genotypes provided will vary, although typically 8 or more animals are provided. Please check genotypes which will be recovered. While the genotypes of all animals produced will be communicated to you prior to scheduling shipment, the genotypes of animals provided may not reflect the mating scheme and genotypes described in the strain description. Animals are typically ready to ship in 11-14 weeks. If a second recovery is required to produce the minimum number of animals, then delivery time would increase to approximately 25 weeks. If we fail to produce animals of the correct genotype, you will not be charged. We cannot guarantee the reproductive success of mice shipped to your facility. If the mice are lost after the first three days (post-arrival) or do not produce progeny at your facility, a new order and fee will be necessary.

Cryorecovery to establish a Dedicated Supply for greater quantities of mice. Mice recovered can be used to establish a dedicated colony to contractually supply you mice according to your requirements. Price by quotation.

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General Terms and Conditions

Questions about Terms of Use

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Phone: 207-288-6470
Email: TechTran@jax.org

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**Related Strains**

- **All**
- **By Allele**
- **By Gene**