STOCK Sst tm2.1(cre)Zjh/J

Stock No: 013044 | Sst-IRESCre

Targeted Mutation

REPOSITORY LIVE

PLACE ORDER

0–2 week average lead time for 10 or more mice with age range

Also Known As: Sst-IRESCre, SOM-IRESCre

Sst-IRESCre knock-in mice express Cre recombinase in somatostatin-expressing neurons. These mice may be useful in studying dendritic inhibitory interneurons such as Martinotti cells and Orients-Lacunosum-Molecular cells.

Of note, the same Sst-IRESCre knock-in allele is also available as C57BL/6N-congenic (Stock No. 018973) and C57BL/6J-congenic (Stock No. 028864).

Donating Investigator

Z. Josh Huang, Cold Spring Harbor Laboratory

READ MORE +

Genetic Background

Generation
F7+F19
(2018-03-06 00:00:00)

| Ssttm2.1(cre)Zjh |

<table>
<thead>
<tr>
<th>Allele Type</th>
<th>Gene Symbol</th>
<th>Gene Name</th>
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<tbody>
<tr>
<td>Targeted (Recombinase-expressing)</td>
<td>Sst</td>
<td>somatostatin</td>
</tr>
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VIEW GENETICS

Research Tools
Neurobiology Research

VIEW ALL RESEARCH APPLICATIONS
The Sst-IDPS-Cre knock-in allele (or SOM-IDPS-Cre) has an internal ribosome entry site and Cre recombinase in the 3' UTR of the somatostatin locus (Sst). As such, the endogenous Sst promoter/enhancer elements direct cre expression to somatostatin-expressing neurons. When Sst-IDPS-Cre mice are bred with mice containing loxp-flanked sequences, Cre-mediated recombination will result in deletion of the floxed sequences in the Sst-expressing cells in the offspring.

In 2010, the donating investigator reported Cre recombinase activity is specific and efficient; largely recapitulating the endogenous somatostatin expression pattern with efficient recombination. They reported Cre recombinase activity is observed in somatostatin positive neurons (including dendritic inhibitory interneurons such as Martinotti cells and Orios-Lacunosum-Moleculare (O-LM) cells). The donating investigator did not examine cre expression in tissues other than brain. Sst expression from the Sst-IDPS-Cre allele was not evaluated. They also reported that homozygous mice were viable, fertile and normal in size, with no gross physical abnormalities or behavioral abnormalities.

In 2016, unpublished research using Stock No. 013044 reported the Sst-IDPS-Cre allele had diminished Sst RNA expression, and homozygous mice had abnormal locomotor activity (reduced in males during circadian cycle active phase, increased in females by the end of circadian cycle active phase). Heterozygous mice had partial recovery of Sst expression and normal behavioral responses. This suggests that although Sst-IDPS-Cre was designed as a 3' knock-in, it may be a hypomorphic allele. Researchers may consider using heterozygous Sst-IDPS-Cre mice in behavioral studies. We will modify the allele/strain description if necessary as published results become available.

For characterization information of the Sst-IDPS-Cre knock-in allele, see images at the Allen Institute for Brain Science website (Sst-IDPS-Cre images).

If the recombinase activity pattern of this allele is further characterized by the Genetic Resource Science group at The Jackson Laboratory, such findings will be reported on the Mouse Genome Informatics (MGI) Allele Detail entry (Sst^{m2.1cre279}). This same information would also be found searching the MGI Recombinase Activity database.

**Development**

**Expression Data**

**Control Suggestions**

**Selected References**

**Genetics**

Sst^{m2.1cre279}
Genotyping Protocols
MELT: Sst\textsuperscript{\textit{tm2.1(cre)Zjh}}
Genotyping resources and troubleshooting

Dietary Information
LabDiet\textsuperscript{\textregistered} 5K52 formulation (6% fat)

Breeding Considerations
Homozygous mice are viable and fertile. When maintaining a live colony at The Jackson Laboratory Repository, homozygous mice may be bred together.

Researchers may consider using heterozygous Sst-IRES-Cre mice in behavioral studies; please see strain description for more details.

Additional Breeding and Husbandry Support

Mating System
Homozygote x Homozygote

Citation
When using the Sst-IRES-Cre mouse strain in a publication, please cite the originating article(s) and include JAX stock #013044 in your Materials and Methods section.

Facility Barrier Level Descriptions
AX10 (Standard)

Pricing & Availability
0–2 week average lead time for 10 or more mice with age range

Domestic International
Pricing effective for USA, Canada and Mexico shipping destinations
<table>
<thead>
<tr>
<th>AGE</th>
<th>SEX</th>
<th>GENOTYPE</th>
<th>PRICE</th>
</tr>
</thead>
</table>
| 4 weeks| Female | Homozygous for Sst
          |       | $300.00                   |
|       | Male   | Homozygous for Sst
          |       | $300.00                   |
| 5 weeks| Female | Homozygous for Sst
          |       | $300.00                   |
|       | Male   | Homozygous for Sst
          |       | $300.00                   |
| 6 weeks| Female | Homozygous for Sst
          |       | $300.00                   |
|       | Male   | Homozygous for Sst
          |       | $300.00                   |
| 7 weeks| Female | Homozygous for Sst
          |       | $300.00                   |
|       | Male   | Homozygous for Sst
          |       | $300.00                   |
| 8 weeks| Female | Homozygous for Sst
          |       | $300.00                   |
|       | Male   | Homozygous for Sst
          |       | $300.00                   |

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| Frozen Mouse Embryo | $2,595.00 per straw or vial |

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### Terms of Use

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Email: TechTran@jax.org

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<tr>
<td>By Gene</td>
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<tr>
<td>By Collection</td>
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All Related Strains

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