B 6.129 (SvJ g) 5-HTT-<sup>−/−</sup> J

Stock No: 008355 | 5-HTT-

- Congenic, Targeted Mutation

Live mice available in varying quantities. Ask Customer Service for details.

Overview

Also Known As: 5-HTT-

These Slc6a4 knock-out mice may be useful in studying the role of serotonin and serotonin transporter in neurological functions and disorders.

Donating Investigator

Dennis L Murphy, NIH, NIMH, LCS
GENETIC OVERVIEW

Genetic Background

**Generation**

N25+1F25
(2019-10-04 00:00:00)

**Slc6a4<sup>tm1Kpl</sup>**

<table>
<thead>
<tr>
<th>Allele Type</th>
<th>Gene Symbol</th>
<th>Gene Name</th>
</tr>
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<tbody>
<tr>
<td>Targeted (Null/Knockout)</td>
<td>Slc6a4</td>
<td>solute carrier family 6 (neurotransmitter transporter, serotonin), member 4</td>
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</tbody>
</table>

RESEARCH APPLICATIONS

- Neurobiology Research
- Diabetes and Obesity Research
- Metabolism Research
- Immunology, Inflammation and Autoimmunity Research
- Internal/Organ Research
- Research Tools
- Cardiovascular Research
- Cell Biology Research

BASE PRICE

Starting at:

- $255.00 Domestic price for female
- $510.00 Domestic price for breeder pair

Details

Mice that are homozygous for the serotonin transporter targeted mutation (SERT<sup>−/−</sup> or 5-HTT<sup>−/−</sup>) are viable and fertile with a superficially unremarkable behavioral phenotype through early adulthood. Serotonin uptake is completely absent in homozygous mice. SERT-deficiency is pleiotropic (many different phenotypic traits). Homozygotes and, to a lesser extent, heterozygotes exhibit diminished responses to serotonin receptor agonists and other classes of drugs (including MDMA, SSRIs, 8-OH-DPAT, and DOI). SERT-mutant mice are also reported to have increased anxiety-like behaviors, altered neuroendocrine and sympathoadrenal responses to even minor stress, diminished aggression, altered emotional learning, substantially increased rapid eye movement (REM) sleep time, reduced brain excitability, increased body temperature, increased colonic motility, reduced spinal reflex to injury, reduced bladder response to stretching, blood pressure responses, diminished bone and muscle strength, reduced physical activity...
and exercise, and obesity associated with hyperglycemia and increased plasma levels of insulin, leptin, triglycerides and cholesterol. These SERT (or 5-HTT) mutant mice may be useful in studying the role of serotonin and serotonin transporter in behavior and learning, social anxiety, neuropsychiatric and neurological disorders (such as autism), pharmacological actions of therapeutic agents or drugs of abuse, inflammatory bowel disease, obesity and type 2 diabetes and other molecular consequences of SERT inactivation.

In an attempt to offer alleles on well-characterized or multiple genetic backgrounds, alleles are frequently moved to a genetic background different from that on which an allele was first characterized. It should be noted that the phenotype could vary from that originally described. We will modify the strain description if necessary as published results become available.

Genotyping Protocols
Standard PCR: Slc6a4<sup>tm1Kpl</sup>
Probe: Slc6a4<sup>tm1Kpl</sup>

Genotyping resources and troubleshooting
Dietary Information
LabDiet® 5K52 formulation (6% fat)
Breeding Considerations
When maintaining a live colony, heterozygous or homozygous mice may be bred. The donating investigator breeds heterozygous females with homozygous males, and recommends monitoring litter frequency and sizes as the high anxiety observed in homozygous (and to a lesser extent heterozygous) females may result in undesirable maternal behaviors. The donating investigator also notes better breedings results if mice are placed in matings at no less than 8 weeks of age.

Additional Breeding and Husbandry Support
Mating System
Heterozygote x Homozygote
HET fem x HOM male (NO RECIP), breed only after 8 weeks old. Please monitor litter frequency and size as anxiety pheno may lead to poor mothering and odd breeding results

Citation
When using the 5-HTT- mouse strain in a publication, please cite the originating article(s) and include JAX stock #008355 in your Materials and Methods section.

Pricing & Availability
Live mice available in varying quantities. Ask Customer Service for details.

Domestic
Pricing effective for USA, Canada and Mexico shipping destinations

Live Mouse

<table>
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<tr>
<th>AGE</th>
<th>SEX</th>
<th>GENOTYPE</th>
<th>PRICE</th>
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<tbody>
<tr>
<td>Approx 4-8 weeks</td>
<td>Female</td>
<td>Heterozygous for Slc6a4&lt;sup&gt;tm1Kpl&lt;/sup&gt;</td>
<td>$255.00</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>Heterozygous for Slc6a4&lt;sup&gt;tm1Kpl&lt;/sup&gt;</td>
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Breeder Pair

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Related Strains

- All
- By Allele
- By Gene
- By Collection

All Related Strains

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