B6SJL-Tg(SOD1*G93A)1Gur/J

Stock No: 002726 | SOD1-G93A

Transgenic

AVAILABLE NOW

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Overview

JAXTag™
Also Known As: B6SJL.SOD1-G93A, SOD1-G93A

These SOD1-G93A transgenic mice express a G93A mutant form of human SOD1 and may be useful in studying neuromuscular disorders such as Amyotrophic Lateral Sclerosis (ALS or Lou Gehrig's Disease).

Our preclinical efficacy testing services offer scientific expertise and an array of target-based and phenotype-based outcome measures, both in vivo and at endpoint, for flexible study designs and assay development in mouse models of Amyotrophic Lateral Sclerosis. See our full service platform.

Donating Investigator
Dr. Mark E. Gurney, Tetra Discovery Partners

GENETIC OVERVIEW

<table>
<thead>
<tr>
<th>Genetic Background</th>
<th>Generation</th>
</tr>
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<tbody>
<tr>
<td>Tg(SOD1*G93A)1Gur</td>
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</table>

Allele Type
Transgenic (Inserted expressed sequence, Humanized sequence)

RESEARCH APPLICATIONS
Metabolism Research
Neurobiology Research
Mouse/Human Gene Homologs
Mice hemizygous for this SOD1-G93A (also called G93A-SOD1) transgene are viable and fertile, with transgenic expression of a G93A mutant form of human SOD1. This founder line (often referred to as G1H) is reported to have high transgene copy number. Hemizygotes exhibit a phenotype similar to amyotrophic lateral sclerosis (ALS) in humans; becoming paralyzed in one or more limbs with paralysis due to loss of motor neurons from the spinal cord. Transgenic mice have an abbreviated life span: 50% survive at 128.9+/−9.1 days (in contrast to C57BL/6J background where 50% survival is observed at 157.1+/−9.3 days).

In contrast to LPS-induced microglia and activated M1/M2 macrophages, spinal cord microglia activated by disease progression do not upregulate genes that display a bias to either an M1 (neurotoxic) phenotype or an M2 (protective) phenotype. The pattern of gene expression in SOD1<sup>G93A</sup> activated microglia represents a unique ALS-specific signature.

When maintaining a live colony, it has been the experience of The Jackson Laboratory that male mice are aggressive. It is our recommendation that no more than 4 males are housed in a box.

These SOD1-G93A (also called G93A-SOD1) transgenic mice may be useful in studying neuromuscular disorders, including Amyotrophic Lateral Sclerosis (ALS or Lou Gehrig's Disease).

This strain ships with a JAXTag™ affixed. Learn more about JAXTag™.
Genotyping Protocols
Standard PCR: Tg(SOD1*G93A)1Gur
Standard PCR: Tg(SOD)
Standard PCR: Tg(SOD1*G93A)1Gur
QPCR: Sod TgN Copy Number

Genotyping resources and troubleshooting

Breeding Considerations

This strain is an exceptional breeder.
The strain is maintained by breeding hemizygous carriers (preferably males) to B6SJLF1 hybrids. When maintaining a live colony, it has been the experience of The Jackson Laboratory that male mice are aggressive. It is our recommendation that no more than 4 males are housed in a box. Expected coat colors from breeding are "White Bellied Agouti, Black, Albino, Tan w/pink eyes."

Additional Breeding and Husbandry Support

Mating System
F1 x Hemizygote

Appearance
multiple coat colors
Related Genotype: segregating for $a$, $A$, $Oca^{2p}$, $Tyr^{c}$ and $Pde6b^{d1}$

Citation
When using the SOD1-G93A mouse strain in a publication, please cite the originating article(s) and include JAX stock #002726 in your Materials and Methods section.

Animal Health Reports

Facility Barrier Level Descriptions

- AX4 (Standard)
- AX29 (Maximum)

Pricing & Availability

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Domestic
Pricing effective for USA, Canada and Mexico shipping destinations
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