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

Stock No: 002726 | SOD1-G93A

Transgenic

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Overview

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

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).

Donating Investigator

Dr. Mark E. Gurney, Tetra Discovery Partners

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GENETIC OVERVIEW

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

Allele Type

Transgenic (Inserted expressed sequence, Humanized sequence)

VIEW GENETICS

RESEARCH APPLICATIONS

Metabolism Research
Neurobiology Research
Mouse/Human Gene Homologs

VIEW ALL RESEARCH APPLICATIONS
Details

Detailed Description

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 SOD1G93A-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™.

Development

Expression Data

Control Suggestions

Selected References

Genetics

Tg(SOD1*G93A)16ur

Disease/Phenotype

Disease Terms
Genotyping Protocols
Standard PCR: Tg(SOD1)
QPCR: Sod TgN Copy Number
MELT: Tg(SOD)
MELT: Tg(SOD)
Genotyping resources and troubleshooting

Dietary Information
LabDiet® 5K52 formulation (6% fat)

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, Oca2D, TyrC and Pde6bRd1

Citation
When using the 5091 C93A 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
- AX1 (Standard)
- AX29 (Maximum)

Pricing & Availability
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