FVB.129(Smnh1tm5(Smn1/SMN2)Mrm/J

Stock No: 008604 | Smn1 C

Congenic, Targeted Mutation

PLACE ORDER

Typically mice are recovered in 10-14 weeks. Contact Customer Service to place an order or for more information.
Overview

Also Known As: Smn1<sup>C</sup>

The Smn<sup>C</sup> hybrid allele contains two tandem Smn1/SMN2 genes. This mutant mouse strain may be useful in studies of Spinal Muscular Atrophy. In addition to motor deficits, SMN deficiencies in these mice may also be useful as a potential model of chronic pain.

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 Spinal Muscular Atrophy. See our full service platform.

Donating Investigator

IMR Colony, The Jackson Laboratory

GENETIC OVERVIEW

<table>
<thead>
<tr>
<th>Genetic Background</th>
<th>Generation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Smn&lt;sup&gt;1&lt;/sup&gt;&lt;sub&gt;tm5(Smn1/SMN2)Mrph&lt;/sub&gt;</strong></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 (Inserted expressed sequence, Humanized sequence)</td>
<td>Smn1</td>
<td>survival motor neuron 1</td>
</tr>
</tbody>
</table>

RESEARCH APPLICATIONS

Neurobiology Research

BASE PRICE

Starting at:

$2,854.50 Domestic price Cryo Recovery
The hybrid allele in this strain, Smn allele C, contains two tandem Smn1/SMN2 genes. Because exon 7 is derived from human SMN2, it is skipped in approximately 90% of the processed mRNA derived from both genes. Western blot analysis of full-length SMN in the spinal cord and liver extracts of homozygous mice (Smn1<sup>CC</sup>) shows reduced relative SMN total protein (mouse + human) compared with heterozygous and wildtype animals. SMN protein levels are significantly reduced in the spinal cord and liver of homozygotes. Smn1<sup>CC</sup> mice exhibit a mild SMA phenotype due to the preferential splicing of the Δ7-SMN gene product over the full-length SMN product. The homozygous phenotype includes reduced body weight, peripheral necrosis (beginning with the tail and moving toward the hindlimbs and then to the pinnae of the ears), mild progressive neuromuscular junction abnormalities and electrophysiological defects, diminished open field activity, decreased bone mineral density, evidence of cardiac abnormalities and heightened nociceptive responses. This mutant mouse strain may be useful in studies of Spinal Muscular Atrophy.

*Development of this model was supported by the Spinal Muscular Atrophy Foundation.*
Genotyping Protocols
- Standard PCR: Smn1<sup>tm5(Smn1/SMN2)Mrph</sup>
- Standard PCR: Smn1<sup>tm5(Smn1/SMN2)Mrph</sup>
- Standard PCR: Generic LacZ
- QPCR: Tg(SMN2*delta7)
- Probe: Generic LacZ

Genotyping resources and troubleshooting

Breeding Considerations
When maintaining a live colony, these mice can be bred as heterozygotes.

Additional Breeding and Husbandry Support

Citation
When using the Smn1<sup>tm5(Smn1/SMN2)Mrph</sup> mouse strain in a publication, please cite the originating article(s) and include JAX stock #008604 in your Materials and Methods section.

Animal Health Reports
Facility Barrier Level Descriptions
Production of mice from cryopreserved embryos or sperm occurs in a maximum barrier room, G200

Pricing & Availability

Cryo Recovery

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 Smn1&lt;sup&gt;tm5(Smn1/SMN2)Mrph&lt;/sup&gt;</td>
<td>$2,854.50</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.

Related Products and Services

<table>
<thead>
<tr>
<th>Product</th>
<th>Description</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frozen Mouse Embryo</td>
<td>FVB.129(B6)-Smn1&lt;sup&gt;tm5(Smn1/SMN2)Mrph&lt;/sup&gt;/J Frozen Embryo</td>
<td>$2595.00</td>
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</tbody>
</table>

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Terms are granted by individual review and stated on the customer invoice(s) and account statement. These transactions are payable in U.S. currency within the granted terms. Payment for services, products, shipping containers, and shipping costs that are
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Terms of Use

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

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