These floxed mutant mice possess loxP sites flanking exon 7 of the Smn1 gene. This strain may be useful for generating conditional mutations in applications related to SMA or other neuromuscular degenerative diseases.

Donating Investigator

IMR Colony, The Jackson Laboratory

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

Genetic Background

<table>
<thead>
<tr>
<th>Smn1&lt;sup&gt;tm1Jme&lt;/sup&gt;</th>
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<tr>
<td>Allele Type</td>
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<tr>
<td>Gene Symbol</td>
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<td>Gene Name</td>
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RESEARCH APPLICATIONS

Neurobiology Research
Research Tools
Mice homozygous for this SMN<sup>F7</sup> floxed allele are viable and fertile and do not display any gross physical or behavioral abnormalities. Mutant mice exhibit no transcript splicing defects. Cre-mediated recombination of the lox<sup>P</sup>-flanked sequences results in deletion of exon 7 of the targeted gene. As mutations of this exon are implicated in 95% of all human spinal muscular atrophy (SMA), these mice may be useful in studying SMA or other neuromuscular degenerative diseases.

When crossed to a strain expressing Cre recombinase in neurons (see Stock No. 005938, Stock No. 006297, and Stock No. 006663), this mutant mouse strain may be useful as a model of SMA.

When crossed to a strain expressing Cre recombinase in striated muscle fibers (see Stock No. 005936, Stock No. 006139, and Stock No. 006149), this mutant mouse strain may be useful as a model of SMA.

SMN<sup>F7</sup> mice are available on different genetic backgrounds (see Stock No. 006138 and Stock No. 006146). 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 SMN<sup>F7</sup> phenotype could vary from that originally described on a mixed genetic background. We will modify the strain description if necessary as published results become available.

Importation of this model was supported by the Spinal Muscular Atrophy Foundation. Creation and development was supported by the National Institute of Health and Medical Research of France (Inserm) and the Association Française contre les Myopathies (AFM). An additional help was provided by Families of SMA (U.S.A.) and Andrew’s Buddies (U.S.A.).

**Genetics**

*Smn<sup>1<sub>Imt1Jme</sub></sup>*
Genotyping Protocols
Standard PCR: Smn1
Genotyping resources and troubleshooting

Breeding Considerations
When maintaining a live colony, homozygous mice may be bred.

Additional Breeding and Husbandry Support

Citation
When using the SMN1 mouse strain in a publication, please cite the originating article(s) and include JAX stock #006138 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

Typically mice are recovered in 10-14 weeks. Contact Customer Service to place an order or for more information.
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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 rendered are expected within the payment terms indicated on the invoice or stated by contract. Invoices and account balances in arrears of stated terms may result in The Jackson Laboratory pursuing collection activities including but not limited to outside agencies and court filings.

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