Overview

JF1/Ms (Japanese Fancy Mouse) was derived from a fancy mouse stock, and has been identified as belonging to species *M. m. molossinus*. JF1 is homozygous for the piebald allele (*EdnrB*). Wild-derived mice are genetically distinct from common laboratory mice for a number of complex phenotypic characteristics and are valuable tools for genetic mapping, evolution and systematics research.

Donating Investigator
Toshihiko Shiroishi
JF1/Ms (Japanese Fancy Mouse) was derived from a mouse stock purchased from a market in Denmark, and has been identified as belonging to species *M. m. molossinus*. JF1 carries the piebald allele, a retroposon-like insertion in intron 1 of the endothelin receptor type B (*Ednrb*) gene, which results in a white coat with black spots and black eyes. The white areas of the coat are lacking in neural crest-derived melanocytes. In addition to alterations in coat color, JF1 mice exhibit a decreased amount of enteric innervation and neuronal density predominantly in the distal colon, but do not exhibit any of the megacolon symptoms often associated with mutations in *Ednrb*. Wild-derived mice are genetically distinct from common laboratory mice for a number of complex phenotypic characteristics and are valuable tools for genetic mapping, evolution and systematics research.

In 2019-2020, researchers at The Jackson Laboratory discovered this inbred strain contains the *Trem2<sup>S148E</sup>* allele - a naturally occurring variant at position 48351151-48351152 on Chr 17 (*rs108080490* and *rs107649577*; Ensembl GRCm38.p6). This TC to GA transition results in a serine to glutamic acid substitution at amino acid 148 (S148E).
Genotyping Protocols
Genotyping resources and troubleshooting

Mating System
Sibling x Sibling

Appearance
black spotted white coat, black eyes
Related Genotype: a/a Ednrb<sup>b</sup>/Ednrb<sup>b</sup>

Citation
When using the JF1/MsJ mouse strain in a publication, please include JAX stock #003720 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.

<table>
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<th>AGE</th>
<th>SEX</th>
<th>GENOTYPE</th>
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<td>Approx 4-8 weeks</td>
<td>Female</td>
<td>Not Applicable</td>
<td>$247.50</td>
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<tr>
<td></td>
<td>Male</td>
<td>Not Applicable</td>
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</tbody>
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All

By Allele

By Gene

By Collection

All Related Strains