JF1/Ms J

Stock No: 003720

Inbred Strain, Wild-Derived

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 (*Ednrβ*). 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.

RESEARCH APPLICATIONS

Sensorineural Research
Mouse/Human Gene Homologs
Dermatology Research
Developmental Biology Research
Neurobiology Research
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, researchers at The Jackson Laboratory discovered this inbred strain has a nonsense mutation in *Trem2* affecting codon 148 (dbSNP ID: rs107649577 [Ensembl GRCm38.p6]).
Genotyping Protocols
Genotyping resources and troubleshooting
Dietary Information
New Diet as of March 2015: Lab Diet® 5K0Q (6% fat)

Mating System
Sibling x Sibling

Appearance
black spotted white coat, black eyes
Related Genotype: \( a\alpha Ednrb^b/Ednrb^b \)

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
\( AX9 \) (Standard)

Pricing & Availability
Live mice available in varying quantities. Ask Customer Service for details.

<table>
<thead>
<tr>
<th>AGE</th>
<th>SEX</th>
<th>GENOTYPE</th>
<th>PRICE</th>
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<tbody>
<tr>
<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

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