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
Details

Detailed Description

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).

Development

Selected References

Genetics

*Ednrb*<sup>S</sup>

Disease/Phenotype

Disease Terms

Research Areas By Phenotype
Genotypic Protocols
Genotyping resources and troubleshooting

Mating System
Sibling x Sibling

Appearance
black spotted white coat, black eyes

Related Genotype: \( a^a \text{Ednrb}^s / \text{Ednrb}^s \)

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>
<thead>
<tr>
<th>LIVE MOUSE</th>
<th>GENOTYPE</th>
<th>PRICE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approx 4-8 weeks</td>
<td>Female</td>
<td>Not Applicable</td>
</tr>
</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 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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Email: TechTran@jax.org

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Related Strains

All

By Allele

By Gene

By Collection

All Related Strains