MSM/Ms was derived from wild mice trapped in Mishima Prefecture, Japan. MSM exhibits resistance to the lymphoma development and carries a \( \text{Tlr3} \) variant that results in hypo-responsiveness to poly(I:C) stimulation.

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.

**GENETIC OVERVIEW**

<table>
<thead>
<tr>
<th>Genetic Background</th>
<th>Generation</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>F67+45</td>
</tr>
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<td>(2019-12-17 00:00:00)</td>
</tr>
</tbody>
</table>

**RESEARCH APPLICATIONS**

Research Tools

**BASE PRICE**

Starting at:

$247.50 Domestic price for female
MSM/Ms was derived from wild mice trapped in Mishima Prefecture, Japan. This strain has been reported to be resistant to the development of lymphoma, due to at least two loci in crosses involving strain SL/Kh (Pataer et al., 1996). C3HxMSM F1 hybrids treated with N-methyl-N-nitrosourea (MNU) develop squamous cell carcinomas of the forestomach with about 20% and 15% having mutations in H-ras and p53, respectively (Masui et al., 1997). Stephan et al. reported that wild-derived strains, MSM, CZECH (Stock No. 001144) and MOLF (Stock No. 000550), exhibit decreased secretion of TNF in response to stimulation by poly(I:C) (a synthetic analog of double-stranded RNA), the result of a P369L substitution in Tlr3. Response to Tlr2, Tlr4 and Tlr7-agonists is normal. 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
Dietary Information
LabDiet® 5K54 formulation (4% fat)

Mating System
Sibling x Sibling
Appearance
white-bellied agouti
Related Genotype: $A^w/A^w$

Citation
When using the MSM/MsJ mouse strain in a publication, please include JAX stock #003719 in your Materials and Methods section.

Animal Health Reports
Facility Barrier Level Descriptions

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

Live Mouse

<table>
<thead>
<tr>
<th>AGE</th>
<th>SEX</th>
<th>PRICE</th>
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</thead>
<tbody>
<tr>
<td>Approx 4-8 weeks</td>
<td>Female</td>
<td>$247.50</td>
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<tr>
<td></td>
<td>Male</td>
<td>$247.50</td>
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that is new to your research, we suggest ordering and performing tests on a small number of mice to determine suitability for your particular project.

Terms Of Use

Use conditions for strain(s).

Licensing Information

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

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Related Strains

All

By Allele

By Gene

By Collection

All Related Strains