129-Sirt3 tm1.Fwa/J

Stock No: 012755 | Sirt3

Targeted Mutation

PLACE ORDER

2-4 week lead time for most orders depending on quantity and age range requested

Overview

Also Known As: Sirt3-

The SIRT3 knock-out allele abolishes sirtuin 3 expression. These mice may be useful in studying the role of fatty acid oxidation in diabetes, cardiovascular disease, steatosis, fasting, cold exposure and life span.

Donating Investigator

Dr. Frederick W. Alt, Children's Hospital
GENETIC OVERVIEW

Genetic Background | Generation
--- | ---
F7×N1 F10 | (2017-07-06 00:00:00)

Sirt3<sup>Im1.1Fwa</sup>

<table>
<thead>
<tr>
<th>Allele Type</th>
<th>Gene Symbol</th>
<th>Gene Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Targeted (Null/Knockout)</td>
<td>Sirt3</td>
<td>sirtuin 3</td>
</tr>
</tbody>
</table>

RESEARCH APPLICATIONS

Diabetes and Obesity Research
Metabolism Research

BASE PRICE
Starting at:

$271.00 Domestic price for female

Details

Detailed Description

The targeted mutation deletes exon 2-3 of the mouse sirtuin 3 gene (Sirt3), abolishing gene function. Homozygous mice are viable, fertile, normal in size and do not display any gross physical or behavioral abnormalities. Sirt3<sup>−/−</sup> mice exhibit hyperacetylation of mitochondrial enzymes, including glutamate dehydrogenase (GDH) and long-chain acyl co-enzyme A dehydrogenase (LCAD), leading to a decrease in the modulation of mitochondrial metabolism and fatty acid oxidation. They show reduced ATP production, cold intolerance, and hypoglycemia. These mice may be useful in studying the role of fatty acid oxidation in diabetes, cardiovascular disease, steatosis, fasting, cold exposure and life span.

Development

Control Suggestions

Genetics

Sirt3<sup>Im1.1Fwa</sup>
Genotyping Protocols
Standard PCR: Sirt3^{tm1,Fwa}
Genotyping resources and troubleshooting

Dietary Information
LabDiet® 5K52 formulation (6% fat)

Breeding Considerations
When maintaining a live colony, homozygous mice may be bred together.
Additional Breeding and Husbandry Support

Mating System
Homozygote x Homozygote

Citation
When using the Sirt3 mouse strain in a publication, please cite the originating articles and include JAX stock #012755 in your Materials and Methods section.

Animal Health Reports
Facility Barrier Level Descriptions
AX10 (Standard)

Pricing & Availability
2–4 week lead time for most orders depending on quantity and age range requested

Repository Live

<table>
<thead>
<tr>
<th>Domestic</th>
<th>International</th>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Live Mouse</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>Homozygous for Sirt3^{tm1,Fwa}</td>
<td>$271.00</td>
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### Related Strains

- **All**
- **By Allele**
- **By Gene**
- **By Collection**

All Related Strains