B6.129-Sirt1<sup>tm1Mcby</sup>/LguJ
Stock No: 026009
Congenic, Targeted Mutation

Typically mice are recovered in 10-14 weeks. Contact Customer Service to place an order or for more information.

Donating Investigator
Leonard P Guarente, Massachusetts Institute of Technology

**GENETIC OVERVIEW**

<table>
<thead>
<tr>
<th>Genetic Background</th>
<th>Generation</th>
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<tbody>
<tr>
<td><strong>Sirt&lt;sup&gt;1&lt;/sup&gt;tm1Mcby</strong></td>
<td></td>
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</tbody>
</table>

- **Allele Type**: Targeted (Null/Knockout)
- **Gene Symbol**: Sirt1
- **Gene Name**: sirtuin 1

**RESEARCH APPLICATIONS**

- Developmental Biology Research
- Cardiovascular Research

**BASE PRICE**
A hygro cassette replaces exons 5-6 of the sirtuin 1 (Sirt1) gene, abolishing gene expression. Heterozygous mice are viable and fertile. Homozygotes are perinatal lethal on inbred backgrounds. The donating investigator reports that F1 crosses of B6 heterozygotes and FVB heterozygotes produces homozygotes at Mendelian ratios. Homozygous F1 offspring are infertile. SIRT1 is a protein deacetylase involved with telomere deacetylation, DNA repair, energy homeostasis. As such SIRT1 plays roles in telomere length maintenance, tumor growth, aging, and improved metabolic syndrome caused by high fat diets. Mice have craniofacial defects, increased apoptosis spermatocytes, and they fail to ovulate. They exhibit microphthalmia, and respiratory, cardiovascular, and immune defects. Some mice develop nephrogenic diabetes insipidus (NDI) characterized by production of large amounts of dilute urine due to the inability of the kidney to concentrate the urine.

**Genetics**

Sirt1^{tm1Mcby}

**Disease/Phenotype**

Disease Terms

Research Areas By Phenotype

Mammalian Phenotype Terms by Genotype
Genotyping Protocols
Standard PCR: Sirt1
Genotyping resources and troubleshooting

Breeding Considerations
When maintaining a live colony, heterozygous mice may be bred to wildtype mice from the colony, or to C57BL/6J inbred mice (Stock No. 000664). Homozygotes are perinatal lethal on an inbred background. The donating investigator reports that an F1 cross of B6 heterozygotes and FVB heterozygotes produces homozygotes at Mendelian ratios. Homozygous F1 offspring are infertile.

Additional Breeding and Husbandry Support

Citation
When using the B6.129-Sirt1<sup>tm1Mcby</sup>/LguJ mouse strain in a publication, please cite the originating article(s) and include JAX stock #026009 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>SERVICE/PRODUCT</th>
<th>DESCRIPTION</th>
<th>PRICE</th>
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<tbody>
<tr>
<td>Cryo Recovery</td>
<td>Heterozygous or wildtype for -Sirt1&lt;tm1Mcby&gt;</td>
<td>$2,854.50</td>
</tr>
</tbody>
</table>
PAYMENT TERMS AND CONDITIONS

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.

THE JACKSON LABORATORY'S GENOTYPE PROMISE

The Jackson Laboratory has rigorous genetic quality control and mutant gene genotyping programs to ensure the genetic background of JAX® Mice strains as well as the genotypes of strains with identified molecular mutations. JAX® Mice strains are only made available to researchers after meeting our standards. However, the phenotype of each strain may not be fully characterized and/or captured in the strain data sheets. Therefore, we cannot guarantee a strain's phenotype will meet all expectations. To ensure that JAX® Mice will meet the needs of individual research projects or when requesting a strain 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. We do not guarantee breeding performance and therefore suggest that investigators order more than one breeding pair to avoid delays in their research.

Terms Of Use

TERMS OF USE

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LICENSING INFORMATION

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

Related Strains

All

By Allele
Did you find what you were looking for?

☐ Yes  ☐ No