B6.129S5-Dhcr24<sup>tm1Lex/SbpaJ</sup>

Stock No: 012564

- Congenic Targeted Mutation

**PLACE ORDER**

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

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**Overview**

These mice harbor a Dhcr24-knockout allele that disrupts catalysis of the last step of cholesterol biosynthesis (the conversion of desmosterol to cholesterol), and may be useful in studying cholesterol biosynthesis, epidermal development, keratinocyte differentiation, and epidermal barrier function, as well as Alzheimer’s disease and tumor biology. In addition, the Dhcr24 gene (also
called selective Alzheimer's disease indicator-1 (Seladin-1)) is reported to be a liver X receptor (LXR) target gene.

**Donating Investigator**
Shailendra B Patel, Medical College of Wisconsin

**GENETIC OVERVIEW**

<table>
<thead>
<tr>
<th>Genetic Background</th>
<th>Generation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dhcr24^{tm1Lex}</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Allele Type</th>
<th>Gene Symbol</th>
<th>Gene Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Targeted (Reporter, Null/Knockout)</td>
<td>Dhcr24</td>
<td>24-dehydrocholesterol reductase</td>
</tr>
</tbody>
</table>

**RESEARCH APPLICATIONS**
Neurobiology Research
Research Tools
Dermatology Research
Developmental Biology Research
Endocrine Deficiency Research
Metabolism Research
Cardiovascular Research
Cell Biology Research

**BASE PRICE**
Starting at:

$2,595.00 Domestic price Cryo Recovery

**Details**

Homzygous mice on the C57BL/6 genetic background die within the first postnatal day with features of lethal restrictive dermopathy; including taut, wrinkle-free, shiny skin, severe defects in epidermal maturation/epidermal barrier function (impaired epidermal...
development), and increased presence of hyperproliferative immature keratinocytes (defective keratinocyte differentiation). The increased transepidermal water loss/increased epidermal water content is associated with increased aquaporin-3 (AQP3) expression throughout the epidermis. Mice heterozygous for this allele are viable and fertile, with no overt phenotype. As the Dhcr24 protein functions to catalyze the last step of cholesterol biosynthesis (the conversion of desmosterol to cholesterol), homozygous disruption of this locus results in desmosterolosis: almost no cholesterol in plasma and tissues with ~99% of total sterols in the form of desmosterol. lacZ expression from the mutant allele is not characterized.

In an attempt to offer alleles on well-characterized or multiple genetic backgrounds, alleles are frequently moved to a genetic background different from that on which an allele was first characterized. It should be noted that the phenotype of Dhcr24-mutant mice was originally described on a mixed C57BL/6;129S5 genetic background. We will modify the strain description if necessary as published results become available.

Genotyping Protocols
Separated PCR: Dhcr24\textsuperscript{m1\textsubscript{Fein}}
Genotyping resources and troubleshooting
Breeding Considerations

When maintaining a live colony, heterozygous mice may be bred together, to wildtype siblings or to C57BL/6J inbred mice (Stock No. 000664). Homozygous mice on the C57BL/6J genetic background die immediately after birth.

Additional Breeding and Husbandry Support

Animal Health Reports

When using the Bl/6J Dhr24<tm1Fein> /Spaj mouse strain in a publication, please cite the originating article(s) and include JAX stock #012564 in your Materials and Methods section.

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>Domestic</th>
<th>International</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cryorecovery - Domestic Pricing</strong></td>
<td><strong>GENOTYPE</strong></td>
</tr>
<tr>
<td>Cryo Recovery</td>
<td>Heterozygous or wild-type for Dhr24&lt;tm1Fein&gt;</td>
</tr>
</tbody>
</table>

We will fulfill your order by providing at least two carriers for each strain ordered. The total number, sex, and genotypes provided will vary, although typically 8 or more animals are provided. Please check genotypes which will be recovered. While the genotypes of all animals produced will be communicated to you prior to scheduling shipment, the genotypes of animals provided may not reflect the mating scheme and genotypes described in the strain description. Animals are typically ready to ship in 11-14 weeks. If a second recovery is required to produce the minimum number of animals, then delivery time would increase to approximately 25 weeks. If we fail to produce animals of the correct genotype, you will not be charged. We cannot guarantee the reproductive success of mice shipped to your facility. If the mice are lost after the first three days (post-arrival) or do not produce progeny at your facility, a new order and fee will be necessary.

Cryorecovery to establish a Dedicated Supply for greater quantities of mice. Mice recovered can be used to establish a dedicated colony to contractually supply you mice according to your requirements. Price by quotation.

Related Products and Services

| Frozen Mouse Embryo | $2,595.00 per straw or vial |

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.

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### Terms Of Use

**General Terms and Conditions**

QUESTIONs ABOUT TERMS OF USE

### 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
Leading the search for
TOMORROW'S CURES