B6.129S2-ALox15tm1Fun/J

Stock No: 002778 | 12/15-LOX KO

- Congenic, Targeted Mutation

PLACE ORDER

2–4 week lead time for up to 4 mice at 4–8 weeks old and age requests are not accepted

Overview

Also Known As: 12/15-LOX KO

Homozygous (12/15-LO-deficient) mutant mice develop a myeloproliferative disorder (similar to human chronic myelogenous leukemia) that progresses to transplantable leukemia. These mutant mice may be useful in studying myeloproliferative disorders,
chronic myelogenous leukemia, and other cancers.

Donating Investigator
Colin D. Funk, Queen's University

GENETIC OVERVIEW

<table>
<thead>
<tr>
<th>Genetic Background</th>
<th>Generation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N11F12:F48</td>
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<tr>
<td></td>
<td>(2018-04-02 00:00:00)</td>
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</tbody>
</table>

Alox15<sup>tm1Fun</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>Alox15</td>
<td>arachidonate 15-lipoxygenase</td>
</tr>
</tbody>
</table>

RESEARCH APPLICATIONS

Cardiovascular Research
Immunology, Inflammation and Autoimmunity Research
Research Tools

BASE PRICE
Starting at:

$231.00 Domestic price for female

Details

Detailed Description

Homozygous (12/15-LO-deficient) mutant mice are viable and fertile. 12/15-LO-deficient mice develop a myeloproliferative disorder (MPD) (similar to human chronic myelogenous leukemia (CML)) that progresses to transplantable leukemia. Chronic MPD stage homozygotes exhibit increased activation of the phosphatidylinositol 3–kinase (PI3-K) pathway, hyperphosphorylation/decreased nuclear accumulation of the transcription factor interferon consensus sequence binding protein (ICSBP), and increased expression of the oncoprotein Bcl-2; all of which are reversible upon treatment with a PI3-K inhibitor. The evolution of MPD to leukemia is associated with additional regulation of ICSBP at the RNA level. Peritoneal macrophages have altered arachidonic acid metabolism as
well as a diminished ability to oxidize low density lipoprotein (LDL) following stimulation. These mutant mice may be useful in studying myeloproliferative disorders, chronic myelogenous leukemia, and other cancers.

**Development**

**Control Suggestions**

**Selected References**

**Genetics**

**Alox15<sup>tm1Fun</sup>**

**Disease/Phenotype**

**Disease Terms**

**Research Areas By Genotype**

**Mammalian Phenotype Terms by Genotype**

**References**

**Technical Support**

CONTACT TECHNICAL SUPPORT

**Genotyping Protocols**
Standard PCR: Alox15<sup>tm1Fun</sup> STD PCR  
High Resolution Melting: Alox15<sup>tm1Fun</sup> STD PCR  
Genotyping resources and troubleshooting

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

**Breeding Considerations**
When maintaining a live colony, homozygous mice can be bred. Coat color expected from breeding is black.  
Additional Breeding and Husbandry Support

**Mating System**
Homozygote x Homozygote

**Citation**
When using the Alox15<sup>tm1Fun</sup> mouse strain in a publication, please cite the originating article(s) and include JAX stock #002778 in your Materials and Methods section.

Facility Barrier Level Descriptions

AX11 (Maximum)
Pricing & Availability

2–4 week lead time for up to 4 mice at 4-8 weeks old and age requests are not accepted

**Domestic | International**

Pricing effective for USA, Canada and Mexico shipping destinations

### Live Mouse

<table>
<thead>
<tr>
<th>AGE</th>
<th>SEX</th>
<th>GENOTYPE</th>
<th>PRICE</th>
</tr>
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<tbody>
<tr>
<td>Approx 4-8 weeks</td>
<td>Female</td>
<td>Homozygous for Alox15&lt;sup&gt;tm1Fun&lt;/sup&gt;</td>
<td>$231.00</td>
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<tr>
<td></td>
<td>Male</td>
<td>Homozygous for Alox15&lt;sup&gt;tm1Fun&lt;/sup&gt;</td>
<td>$231.00</td>
</tr>
</tbody>
</table>

### Related Products and Services

- Frozen Mouse Embryo: $2,595.00 per straw or vial

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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

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

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**Related Strains**

- All
- By Allele
- By Gene
- By Collection

All Related Strains