Overview

Also Known As: A₁R knock-out (A1R KO)

A₁R knock-out has a neomycin resistance cassette replacing exon 2 of the endogenous adenosine A1 receptor gene. These mice may be useful for studying pharmacological uses of adenosine regarding cardiac function, oxygen consumption, and insulin secretion.

Stock No: 014161 | A₁R knock-out (A1R KO)

ณ Congenic, Targeted Mutation

CRYO RECOVERY

PLACE ORDER

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

<table>
<thead>
<tr>
<th>Genetic Background</th>
<th>Generation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adora1&lt;sup&gt;tm1Bbf&lt;/sup&gt;</td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>Allele Type</th>
<th>Gene Symbol</th>
<th>Gene Name</th>
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<tbody>
<tr>
<td>Targeted (Null/Knockout)</td>
<td>Adora1</td>
<td>adenosine A1 receptor</td>
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</tbody>
</table>

RESEARCH APPLICATIONS

- Developmental Biology Research
- Cardiovascular Research
- Diabetes and Obesity Research
- Neurobiology Research

BASE PRICE

Starting at:

$2,854.50 Domestic price Cryo Recovery

Details

In this A<sub>1</sub>R strain, neomycin resistance (neo) cassette replaces exon 2 of the endogenous adenosine A1 receptor (Adora1) gene, abolishing gene function. Heterozygotes are viable, fertile, and normal in size. Homozygotes have a decreased survival rate after 5 months of age and males exhibit reduced fertility. The binding of adenosine to A<sub>1</sub>R inhibits excitatory synaptic transmissions in the brain and causes dilation of veins and arteries. These mice exhibit an increase in hyperalgesia, anxiety, hypoxic damage, lipolysis, insulin secretion, osteopetrosis, and susceptibility to epilepsy. They also have abolished tubuloglomerular feedback and a reduction in ischemic preconditioning. These mice have a decrease recovery rate after hypoxic or ischemic stress.

Development
Breeding Considerations
When maintaining a live colony, heterozygous mice may be bred to wildtype mice from the colony or to C57BL/6NJ inbred mice (Stock No. 005304). Homozygotes have a decreased survival rate after 5 months of age and males exhibit reduced fertility.

Additional Breeding and Husbandry Support

Citation
When using the A1R knock-out (A1R KO) mouse strain in a publication, please cite the originating article(s) and include JAX stock #014161 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.
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.

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.

Terms Of Use

Terms of Use
General Terms and Conditions

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

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Related Strains

- All
- By Allele
- By Gene
- By Collection