C:129S-Adora2a<sup>tm1Jfc</sup>/J

Stock No: 010685 | A<sub>2a</sub> KO

Targeted Mutation

Also Known As: A<sub>2a</sub> KO, A2AAR-, A2aR-, A2AR KO

Mice that are homozygous for this knockout of the Adora2a gene, are resistant to experimentally induced ischemic brain injury and exhibit increased resistance to the addictive substances amphetamine and cocaine.

Donating Investigator

Joel Linden, University of Virginia

GENETIC OVERVIEW

<table>
<thead>
<tr>
<th>Genetic Background</th>
<th>Generation</th>
</tr>
</thead>
<tbody>
<tr>
<td>N2F7×F19</td>
<td>(2018-08-08 00:00:00)</td>
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</table>

Adora2a<sup>tm1Jfc</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>Adora2a</td>
<td>adenosine A2a receptor</td>
</tr>
</tbody>
</table>

RESEARCH APPLICATIONS

Research Tools
Cardiovascular Research
Neurobiology Research
Immunology, Inflammation and Autoimmunity Research

VIEW GENETICS

VIEW ALL RESEARCH APPLICATIONS
Details

Detailed Description

Mice that are homozygous for the targeted mutation are viable, fertile, normal in size and do not display any gross physical or behavioral abnormalities. No functional gene product (protein) is detected by receptor autoradiography analysis of the brain. Experimentally induced cerebral infarction volume and resulting neurological function impairment are reduced in homozygotes. Treatment with receptor agonist, CGS 21680, does not elicit decreased locomotor activity in homozygotes, as compared to wildtype. Homozygotes have reduced spontaneous activity and increased resistance to the addictive substances amphetamine and cocaine. This mutant mouse strain may be useful in studies of behavior, ischemic brain injury, stroke, responses to addictive substances and T cell response to inflammation.

Development

Control Suggestions

Selected References

Genetics

Adora2a<sup>tm1Jic</sup>

Disease/Phenotype

Disease Terms

Research Areas By Genotype

Mammalian Phenotype Terms by Genotype

References

Technical Support
Genotyping Protocols
Standard PCR: Adora2b^{tm1.Jfc}
Genotyping resources and troubleshooting

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

Breeding Considerations
When maintaining a live colony, these mice can be bred as homozygotes.
Additional Breeding and Husbandry Support

Mating System
Homozygote x Homozygote

Citation
When using the A/J KO mouse strain in a publication, please cite the originating article(s) and include JAX stock #010685 in your Materials and Methods section.

Animal Health Reports
AX10 (Standard)

Pricing & Availability
3–6 week average lead time depending on quantity and age requests are not accepted

Repository Live

Domestic | International
Pricing effective for USA, Canada and Mexico shipping destinations

<table>
<thead>
<tr>
<th>AGE</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 Adora2b^{tm1.Jfc}</td>
<td>$271.00</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>Homozygous for Adora2b^{tm1.Jfc}</td>
<td>$271.00</td>
</tr>
</tbody>
</table>

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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**General Terms and Conditions**

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

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All

By Allele

By Gene

By Collection

All Related Strains

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DONATE

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