B6.129S4-Adcyap1<sup>im1Cw/J</sup>

Stock No: 009641

- 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.

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**Overview**

Mice that are homozygous for this targeted mutation of Adcyap1 (adenylate cyclase activating polypeptide 1) exhibit defective thermoregulation, hyperactivity, abnormal circadian phase shift, delayed testicular aging, increased sensitivity to experimental autoimmune encephalomyelitis (EAE) and impaired peripheral nerve axon regeneration. This mutant mouse strain may be useful in studies of photo-entrainment of circadian rhythm and other physiological changes induced by light, behavior, autoimmunity and inflammation, and peripheral nerve repair.
Donating Investigator
James Waschek, UCLA

## GENETIC OVERVIEW

<table>
<thead>
<tr>
<th>Genetic Background</th>
<th>Generation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adcyap1&lt;sup&gt;tm1Clw&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>
</tr>
</thead>
<tbody>
<tr>
<td>Targeted (Null/Knockout)</td>
<td>Adcyap1</td>
<td>adenylate cyclase activating polypeptide 1</td>
</tr>
</tbody>
</table>

## RESEARCH APPLICATIONS

- Neurobiology Research
- Metabolism Research
- Immunology, Inflammation and Autoimmunity Research
- Reproductive Biology Research

## BASE PRICE

Starting at:

$2,854.50 Domestic price Cryo Recovery

## Details

### Detailed Description

Mice that are homozygous for the targeted mutation are viable, but experience high postnatal mortality between postnatal week 1 and 2 due to thermoregulatory defect. The Donating Investigator reports that postnatal survival is improved if temperature is kept at 82.5°F. Homozygous males are fertile, homozygous females are subfertile. No gene product (protein) is detected by RIA (radioimmunoassay) analysis of hypothalamus, cerebral cortex, kidney, and stomach tissues in homozygotes. Homozygotes exhibit sustained hyperactivity, shortened circadian period and abnormal circadian phase shifting with 50% reduction in the magnitude of light cue phase shift. Homozygous mice lack the light stimulation increase of sympathetic nerve activity and plasma corticosterone that is observed in wildtype mice. Testicular aging is delayed in 15-month old male homozygotes; reactive oxygen species generation and apoptosis in the testis is reduced. Young male homozygotes (4 month old) exhibit decreased steroidogenesis with lower seminal...
vesicle weight, low testosterone level, and low expression levels of steroidogenic acute regulatory protein (StAR) and 3-hydroxysteroid dehydrogenase (3-1S0). After crush injury, homozygotes have impaired peripheral nerve axon regeneration. Homozygotes also have increased sensitivity to experimental autoimmune encephalomyelitis (EAE). This mutant mouse strain may be useful in studies of photo-entrainment of circadian rhythm and other physiological changes induced by light, behavior, autoimmunity and inflammation, and peripheral nerve repair.

### Development

### Control Suggestions

### Selected References

### Genetics

**Adcyap1tm1Ciw**

### Disease/Phenotype

### Disease Terms

### Research Areas By Genotype

### Mammalian Phenotype Terms by Genotype

### References

### Technical Support

CHAT OFFLINE

CONTACT TECHNICAL SUPPORT

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**Genotyping Protocols**
Separed PCR: Adcyap1tm1Ciw
Genotyping resources and troubleshooting

**Breeding Considerations**
When maintaining a live colony, these mice can be bred as heterozygotes. Homozygotes experience high postnatal mortality between postnatal week 1 and 2 due to thermoregulatory defect and homozygous females are subfertile. The Donating Investigator reports that postnatal survival is improved if temperature is kept at 82.5 F.

Additional Breeding and Husbandry Support

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**Citation**
Animal Health Reports

Production of mice from cryopreserved embryos or sperm occurs in a maximum barrier room, G200

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Pricing & Availability

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

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

<table>
<thead>
<tr>
<th>Cryorecovery - Domestic Pricing</th>
<th>GENOTYPE</th>
<th>PRICE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cryo Recovery</td>
<td>Heterozygous or Wild type for Adcyap1&lt;tm1Clw&gt;</td>
<td>$2,854.50</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.

#### 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.

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