STOCK Atf4<sup>tm1Tow</sup>/J

Stock No: 013072

Targeted Mutation

REQUEST CRYORECOVERY

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

Overview

Also Known As: B6;129-Atf4<sup>tm1Tow</sup>/J

In this strain, a neomycin phosphotransferase resistance (neo) cassette replaces the entire coding region of the endogenous mouse activating transcription factor 4 (Atf4) gene, abolishign gene function. These mice may be useful for studying cell proliferation defects associated with blindness, osteoporosis, and stress responses.

Donating Investigator

Dr. Tim Townes, University of Alabama at Birmingham

READ MORE »
GENETIC OVERVIEW

<table>
<thead>
<tr>
<th>Genetic Background</th>
<th>Generation</th>
</tr>
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<tbody>
<tr>
<td>Atf4&lt;sup&gt;tm1Tow&lt;/sup&gt;</td>
<td></td>
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<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>Atf4</td>
<td>activating transcription factor 4</td>
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RESEARCH APPLICATIONS

Developmental Biology Research
Research Tools

BASE PRICE

Starting at:

$2,595.00 Domestic price Cryo Recovery

VIEW PRICE LIST

Details

Detailed Description

In this strain, a neomycin phosphotransferase resistance (neo) cassette replaces the entire coding region of the endogenous mouse activating transcription factor 4 (Atf4) gene, abolishing gene function. Mice homozygous for the Atf4 allele exhibit low viability, with delayed bone formation during embryonic development and low bone mass throughout postnatal life. They exhibit a reduction in oxidative stress-induced gene expression, resistance to oxidative death, and decreased consumption of the antioxidant glutathione. They also have decreased insulin sensitivity, smaller fat pads, and delayed hair growth as compared with control mice. Adults are severely microphthalmic, with no recognizable lens, anterior chamber, iris, or vitreous body. These mice may be useful for studying cell proliferation defects associated with blindness, osteoporosis, and stress responses.

Development

Control Suggestions

Selected References

Genetics
**Genotyping Protocols**
Standard PCR: Atf4<sup>tm1Tow</sup>alternate1
Genotyping resources and troubleshooting

**Breeding Considerations**
When maintaining a live colony, heterozygous mice may be bred to wildtype littermates. The Donating Investigator confirms homozygous lethality on a 129 background in addition it has been the experience of the Jackson Laboratory that Atf4 homozygous mutants are not generated from heterozygous matings on this mixed genetic background.
Additional Breeding and Husbandry Support

**Citation**
When using the STOCK Atf4<sup>tm1Tow</sup>/J mouse strain in a publication, please cite the originating article(s) and include JAX stock #013072 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.

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

**Cryorecovery - Domestic Pricing**
<table>
<thead>
<tr>
<th>SERVICE</th>
<th>GENOTYPE</th>
<th>PRICE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cryo Recovery</td>
<td>Please inquire</td>
<td>$2,595.00</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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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**

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[General Terms and Conditions](#)
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