C3He-Atp7b tx-/J

Overview

Also Known As: toxic milk Jackson

These mice carry a spontaneous mutation at the Atp7b locus characterized by cirrhosis, copper deficiency, and early mortality.
**Atp7b<sup>tx-J</sup>**

**Allele Type**  
Spontaneous

**Gene Symbol**  
Atp7b

**Gene Name**  
ATPase, Cu++ transporting, beta polypeptide

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**RESEARCH APPLICATIONS**

Metabolism Research  
Mouse/Human Gene Homologs

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**BASE PRICE**

Starting at:

$2,854.50 Domestic price Cryo Recovery

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**Details**

**Important Note**

The first four litters born to homozygous females should be fostered. BALB/cByJ (Stock No. 001026) or B6EiO2F1/J (Stock No. 003550) have been successfully used as foster mothers for this strain. This strain is homozygous for the retinal degeneration allele, Pdeo<sup>b<sup>−/−</sup></sup>.

**Detailed Description**

Wilson disease (WD) is an autosomal recessive defect of copper transport characterized by massive accumulation of copper in the liver, which can lead to liver failure. Mutations in a copper transporting ATPase (WND or ATP7B) have been shown to cause the disease. The toxic milk mouse mutant (Atp7b<sup>tx</sup>) accumulates copper in the liver in a manner similar to that observed in patients with WD. The autosomal recessive mutation (Atp7b<sup>tx-J</sup>) arose in 1987 in the C3H/HeJ animal resources colony at The Jackson Laboratory. As with the Atp7b<sup>tx</sup> mutant, adult homozygous Atp7b<sup>tx-J</sup> mice develop cirrhosis, and infant mice are pale colored, copper deficient, and display early mortality unless fostered by wild-type dams. The mutation comprises a G to A base substitution at position 2135 in exon 8 of the gene. This strain should be particularly useful in the study of neurological diseases in which copper accumulation plays an active role in pathology, including Alzheimer disease.

**Development**

**Control Suggestions**

**Genetics**

**Atp7b<sup>tx-J</sup>**
Genotyping Protocols
Pyrosequencing: Atp7b1<sup>x<sub>j</sub></sup>
Sanger sequencing: Atp7b<sup>x<sub>J-SEQ</sub></sup>
Genotyping resources and troubleshooting

Breeding Considerations
Litters must be fostered prior to 14 days of age. On an agouti background, pups are dirty gray in coat color. On a non-agouti background, pups are bronze/copper in color. The first 4 litters will have all pups phenotypically dirty white and dead by 14 days due to the reduced copper concentration in the birth mother’s milk. Pups can be fostered at up to 10-14 days of age, and survive, even from the first litter. The fifth litter and beyond may be phenotypically normal in coat color and live normally to survive to a year of age. These healthy progeny are still homozygous and their first 1 to 4 litters will be affected. At The Jackson Laboratory BALB/cByJ or B6E12F1 have been successfully used as foster mothers for this colony.
Additional Breeding and Husbandry Support

Appearance
agouti
Related Genotype: A/A

Citation
When using the toxic milk, Jackson mouse strain in a publication, please cite the originating article(s) and include JAX stock #001576 in your Materials and Methods section.

Animal Health Reports
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
Pricing effective for USA, Canada and Mexico shipping destinations
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.

### Terms Of Use

#### Terms of Use

**General Terms and Conditions**

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

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