Overview

Also Known As: ZAP-70 KO

These Zap70 knock-out mice exhibit arrest of Thymic development at the CD4+/CD8+ Double Positive stage.

Donating Investigator
GENETIC OVERVIEW

<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>Zap70</td>
<td>zeta-chain (TCR) associated protein kinase</td>
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RESEARCH APPLICATIONS

Immunology, Inflammation and Autoimmunity Research
Research Tools

BASE PRICE
Starting at:

$2,595.00 Domestic price Cryo Recovery

Details

Detailed Description
Mice that are homozygous null for the Zap70 gene are viable, fertile, and are immunodeficient. No Zap70 gene product (protein) is immunodetected in the thymocytes of homozygous mice. An intermediate level of expression was immunodetected in the thymocytes of heterozygous mice. Thymic development is arrested at the CD4+/CD8+ Double Positive stage. No peripheral T lymphocytes are detected. Fewer dendritic epidermal T cells were immunodetectable, and those present have an abnormal morphology. This mutant mouse strain represents a model that may be useful in studies related to a rare autosomal recessive form of human SCID as well as thymic development.

Development

Control Suggestions
Genotyping Protocols
QPCR: Generic Neo Quantitative PCR-QPCR- 1.2
Standard PCR: Zap70<sup>0<sub>1</sub>Wies</sup>
Separated PCR: Zap70<sup>0<sub>1</sub>Wies alternate1</sup>
Separated MCA: Zap70<sup>0<sub>1</sub>Wies alternate1</sup>
Genotyping resources and troubleshooting

Breeding Considerations
This strain originated and is maintained on a B6.129X background and has been crossed to C57BL/6 at least five times before being made homozygous. Homozygous mice are more susceptible to pathogenic bacteria so conventional specific pathogen-free (SPF) conditions and occasional prophylactic antibiotic treatment are recommended by donating investigator.

Additional Breeding and Husbandry Support

Citation
When using the ZAP-70 KO mouse strain in a publication, please cite the originating article(s) and include JAX stock #004225 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.
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.
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Related Strains

All

By Allele

By Gene

By Collection

All Related Strains