Overview

These mice carry a knockout allele of Tnfsf13 (tumor necrosis factor (ligand) superfamily, member 13; also called APRIL). Homozygous null animals exhibit increased in vitro T cell proliferation, enhanced Th2 cytokine production under non-polarizing conditions, and augmented IL-13 and IL-17 production under Th2 polarizing conditions. Data indicates that TNFSF13 plays an important role in the regulation of cytokine production, and that TNFSF13-triggered signals contribute to arthritis.

Donating Investigator

Eckhard R. Podack, University of Miami
**GENETIC OVERVIEW**

<table>
<thead>
<tr>
<th>Genetic Background</th>
<th>Generation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tnfsf13&lt;sup&gt;tm1Pod&lt;/sup&gt;</td>
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<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>Tnfsf13</td>
<td>tumor necrosis factor (ligand) superfamily, member 13</td>
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**RESEARCH APPLICATIONS**

Cancer Research
Immunology, Inflammation and Autoimmunity Research

**BASE PRICE**
Starting at:

$2,854.50 Domestic price Cryo Recovery

**Details**

*Tnfsf13*, (tumor necrosis factor (ligand) superfamily, member 13; also called APRIL) encodes a proliferation-inducing ligand that shares receptors with B-cell activation factor of the TNF family (BAFF) on B and T cells. Roles of *Tnfsf13* in tumor development, B and T cell immunity and autoimmunity have been reported.

These mice carry a knockout allele of *Tnfsf13*. Homozygous mice show a complete absence of mRNA in splenocytes and are viable and fertile. Homozygous null animals exhibit increased *in vitro* T cell proliferation, enhanced Th2 cytokine production under non-polarizing conditions, and augmented IL-13 and IL-17 production under Th2 polarizing conditions.

Upon immunization with OVA and aluminum potassium sulfate (Alum), homozygous null mice respond with an increased antigen-specific IgG1 response. They also have significantly aggravated lung inflammation compared with wildtype mice in the ovalbumin-induced allergic lung inflammation model.
The incidence of collagen-induced arthritis (CIA) is significantly reduced compared to wildtype mice in parallel with diminished levels of antigen specific IgG2a autoantibody and IL-17 production. Data indicates that TNFSF13 plays an important role in the regulation of cytokine production, and that TNFSF13-triggered signals contribute to arthritis. Blockade of TNFSF13 thus may be a valuable adjunct in the treatment of rheumatoid arthritis (RA).

Genotyping Protocols
Standard PCR: Tnfsf13<sup>tm1Pod</sup>
Genotyping resources and troubleshooting

Citation
When using the B6.Cg-Tnfsf13<sup>tm1Pod</sup>/J mouse strain in a publication, please cite the originating article(s) and include JAX stock #022971 in your Materials and Methods section.

Production of mice from cryopreserved embryos or sperm occurs in a maximum barrier room, G200
Typically mice are recovered in 10-14 weeks. Contact Customer Service to place an order or for more information.

**Domestic and International**

Pricing effective for USA, Canada and Mexico shipping destinations

<table>
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<tr>
<th>SERVICE</th>
<th>GENOTYPE</th>
<th>PRICE</th>
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<tbody>
<tr>
<td>Cryo Recovery</td>
<td>Heterozygous for Tnfsf13&lt;tm1Pod&gt;</td>
<td>$2,854.50</td>
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</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.

<table>
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<tr>
<th>Related Products and Services</th>
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<tbody>
<tr>
<td>Frozen Mouse Embryo</td>
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<tr>
<td>B6.Cg-Tnfsf13&lt;tm1Pod&gt;/J Frozen Embryo</td>
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</tbody>
</table>

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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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Email: TechTran@jax.org
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