Overview

Also Known As: Trif<sup>Lps2</sup>

Macrophages in these mice fail to produce tumor necrosis factor (TNF) upon challenge from synthetic lipid A, endotoxin lipopolysaccharide (LPS), and dsRNA. These mice may be useful in studies of immunodeficiency and host response to bacterial endotoxins and viruses.

Donating Investigator

Bruce Beutler, University of Texas Southwestern Medical
**GENETIC OVERVIEW**

<table>
<thead>
<tr>
<th>Genetic Background</th>
<th>Generation</th>
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</thead>
<tbody>
<tr>
<td>Chemically induced (ENU) (Not Specified)</td>
<td>N2+F9 (2019-06-13 00:00:00)</td>
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</tbody>
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**Ticam^Lps2**

<table>
<thead>
<tr>
<th>Allele Type</th>
<th>Gene Symbol</th>
<th>Gene Name</th>
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<tbody>
<tr>
<td>Chemically induced (ENU) (Not Specified)</td>
<td>Ticam1</td>
<td>toll-like receptor adaptor molecule 1</td>
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</tbody>
</table>

**RESEARCH APPLICATIONS**

**Immunology, Inflammation and Autoimmunity Research**

**Research Tools**

**BASE PRICE**

**Starting at:**

$236.78 Domestic price for female 4-week

**Details**

Mice that are homozygous for the mutation are viable, fertile, normal in size and do not display any gross physical or behavioral abnormalities. This single base pair deletion mutation was induced by ENU mutagenesis. Unlike wildtype macrophages, macrophages derived from these animals fail to respond to synthetic lipid A, endotoxin lipopolysaccharide (LPS), and dsRNA with production of tumor necrosis factor (TNF). Macrophages are less susceptible to LPS-induced cytotoxicity. Nitrous oxide and type I interferon production in activated macrophages is impaired. Homozygotes exhibit increased susceptibility to mouse cytomegalovirus. Although homozygotes are resistant to challenges with LPS, the mice will become ill and some may die.

**Development**

**Control Suggestions**

**Selected References**

**Genetics**
**Genotyping Protocols**

End Point Analysis: **Ticam\textsuperscript{Lps2}**

Standard PCR: **Ticam\textsuperscript{Lps2}**

**Genotyping resources and troubleshooting**

**Dietary Information**

LabDiet® 5K52 formulation (6% fat)

**Breeding Considerations**

This strain originated on a C57BL/6 background. Heterozygotes were intercrossed to generate homozygotes. SPF (Specific Pathogen Free) conditions should be implemented as these mice are immunodeficient.

**Additional Breeding and Husbandry Support**

**Mating System**

Homozygote x Homozygote

**Citation**

When using the **Ticam\textsuperscript{Lps2}** mouse strain in a publication, please cite the originating article(s) and include JAX stock #005037 in your Materials and Methods section.

**Animal Health Reports**

**Facility Barrier Level Descriptions**

- AX11 (Maximum)

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**Pricing & Availability**

Live mice available in varying quantities. Ask Customer Service for details.

**Domestic**

Pricing effective for USA, Canada and Mexico shipping destinations

**Live Mouse**
<table>
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<tr>
<th>AGE</th>
<th>SEX</th>
<th>GENOTYPE</th>
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