B6;129-Mertk^{tmGr}J

Stock No: 011122 | mer -

Targeted Mutation

AVAILABLE

PLACE ORDER

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

Overview

Also Known As: mer -
This knock-out mutation of the c-mer proto-oncogene tyrosine kinase gene (Mertk) exhibits photoreceptor degeneration and abnormal endotoxin response. In combination with mutations in other receptor tyrosine kinases, this Mer - strain may be useful in studying autoimmunity, germ cell development, homeostatic regulation and apoptosis.

Donating Investigator

Greg Lemke, The Salk Institute

H. Shelton Earp, University of North Carolina, Chapel Hill

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GENETIC OVERVIEW
**Genetic Background**

**Generation**

F7×N1F19  
(2018-12-21 00:00:00)

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**Mertk**<sup>tm1Grl</sup>

<table>
<thead>
<tr>
<th>Allele Type</th>
<th>Gene Symbol</th>
<th>Gene Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Targeted (Null/Knockout)</td>
<td>Mertk</td>
<td>c-mer proto-oncogene tyrosine kinase</td>
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**Research Applications**

Apoptosis Research  
Immunology, Inflammation and Autoimmunity Research  
Sensorineural Research  
Reproductive Biology Research

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**Base Price**

Starting at:

$236.78 Domestic price for female

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**Details**

**Detailed Description**

Mice that are homozygous for the targeted mutation are viable, fertile, normal in size and do not display any gross physical or behavioral abnormalities. In response to endotoxin, homozygotes exhibit an increase in spleen size and a decrease in monocyte response. Retinal photoreceptor epithelial cells fail to phagocytose outer segment membranes resulting in complete photoreceptor degeneration and blindness.

When combined with the mutations *Tyro3<sup>tm1Grl</sup>* (Stock No. 007937) and *Ax1<sup>tm1Grl</sup>* (Stock No. 011121) mice exhibit a lymphoproliferative disorder, autoimmunity, increased apoptosis in multiple tissues, abnormal spermatogenesis and reduced (in females) fertility or infertility (in males).

This mutant mouse strain may be useful in studies of autoimmunity, germ cell development homeostatic regulation and apoptosis.

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**Development**

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**Control Suggestions**

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**Selected References**
Genotyping Protocols
Probe: Merk<sup>Im1Grl</sup> Probe
Separated PCR: Merk<sup>Im1Grl</sup> alternate2
Genotyping resources and troubleshooting

Dietary Information
LabDiet® 5K52 formulation (6% fat)

Breeding Considerations
While maintaining a live colony, these mice are bred as homozygotes.

Additional Breeding and Husbandry Support

Mating System
Homozygote x Homozygote

Citation
When using the mouse strain in a publication, please cite the originating article(s) and include JAX stock #011122 in your Materials and Methods section.

Facility Barrier Level Descriptions

- FGB29 (Standard)

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

Available

Domestic International
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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Related Strains

- All
- By Allele
- By Gene
- By Collection

All Related Strains