Overview

Also Known As: IFN-αβR-

Mice homozygous for this Ifnar1 knock-out mutation are more susceptible to viral infection, have an abnormal NK antitumor response, and reduced bone mass. This mutant mouse strain may be useful in studies of immunological responses to infection, and bone homeostasis. Mouse mutants involving this gene have been used in studies of Zika virus pathogenesis. Note: these mice carry the same allele as 'A129' mice, although on a congenic C57BL/6, not 129, genetic background.

Donating Investigator

Dr. Michel Aguet, EPFL, Ecole polytechnique fédérale de Lausanne
GENETIC OVERVIEW

<table>
<thead>
<tr>
<th>Genetic Background</th>
<th>Generation</th>
</tr>
</thead>
<tbody>
<tr>
<td>N6+N1F8</td>
<td>2018-11-30</td>
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</table>

**Ifnar1**

<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>Ifnar1</td>
<td>interferon (alpha and beta) receptor 1</td>
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RESEARCH APPLICATIONS

Immunology, Inflammation and Autoimmunity Research  
Research Tools  
Cancer Research  
Cell Biology Research  
Endocrine Deficiency Research

Details

Mice that are homozygous for the targeted mutation are viable, fertile, and normal in size. No gene product (mRNA) is detected by Northern blot analysis of homozygous primary embryonic fibroblasts. Mice that are homozygous for this targeted allele lack type I IFN receptor function, exhibit enhanced osteoclastogenesis with decreased bone density, and impaired response to protozoan parasite (Leishmania) infection. NK cell mediated tumor regression does not occur in homozygotes in response to B16 melanoma tumor implant model. Mouse mutants involving this gene have been used in studies of Zika virus pathogenesis.

Development

Control Suggestions

Selected References

Genetics

**Ifnar1**

**Ifnar1**
Genotyping Protocols
Standard PCR: Ifnar1
Probe: Ifnar1

Genotyping resources and troubleshooting

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

Breeding Considerations
When maintaining a live colony, these mice can be bred as homozygotes. SPF conditions are recommended.

Additional Breeding and Husbandry Support
Mating System
Homozygote x Homozygote

Citation
When using the IFN-αβR− mouse strain in a publication, please cite the originating article(s) and include MMRRC stock #32045 in your Materials and Methods section.

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