B6.129S7-Rag1<sup>tm1Mom</sup>/J

Stock No: 002216 | Rag1 KO

- Congenic Targeted Mutation

**PLACE ORDER**

Sized to accommodate orders of up to 100 or more. Call Customer Service for details.
Also Known As: Rag1 KO
Mice homozygous for the Rag1\textsuperscript{tm1Mom} mutation produce no mature T cells or B cells. Their phenotype can be described as a "non-leaky" immune deficiency.

Donating Investigator
IMR Colony, The Jackson Laboratory

GENETIC OVERVIEW

<table>
<thead>
<tr>
<th>Genetic Background</th>
<th>Generation</th>
<th>Contact Technical Support</th>
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<tbody>
<tr>
<td>000664 C57BL/6J</td>
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Rag1\textsuperscript{tm1Mom}

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<tr>
<th>Allele Type</th>
<th>Gene Symbol</th>
<th>Gene Name</th>
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<tr>
<td>Targeted (Null/Knockout)</td>
<td>Rag1</td>
<td>recombination activating gene 1</td>
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RESEARCH APPLICATIONS

Research Tools
Immunology, Inflammation and Autoimmunity Research
Internal/Organ Research
Cancer Research
Hematological Research

VIEW GENETICS

VIEW ALL RESEARCH APPLICATIONS
Mice homozygous for the Rag1<sup>1<sub>tm1Mom</sub></sup> mutation produce no mature T cells or B cells. Whereas Prkdc<sup>scid</sup> homozygotes produce some B cells and IgM (i.e., are 'leaky'), Rag1<sup>1<sub>tm1Mom</sub></sup> homozygotes lack all mature lymphocytes (i.e., are 'non-leaky'). Rag1 null mice have no CD3<sup>+</sup> or T cell receptor (TCR) alpha-beta positive cells. The thymus of the mutant mice contains 15 to 130 times fewer cells than heterozygous or wild-type siblings. The thymocytes are CD8<sup>+</sup>CD4<sup>-</sup> and most are IL2 receptor-positive. Neither the spleen nor the bone marrow contain any IgM or IgD staining cells, indicating an absence of mature B cells. These and other data suggest that B cell and T cell development has been arrested at an early stage. Macroscopically, the mutants are indistinguishable from heterozygotes or normal wild-type siblings.
Genotyping Protocols
MELT: Rag1<sup>tm1Mom</sup> Alternate1
Genotyping resources and troubleshooting

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

Breeding Considerations

This strain is a good breeder.
This Rag1<sup>tm1Mom</sup> strain is maintained by mating homozygous siblings. This strain should be housed under pathogen free conditions similar to Prkdc<sup>scid</sup>/Prkdc<sup>scid</sup> mice or any other immunodeficient strain. Only homozygous mice may be ordered.

Additional Breeding and Husbandry Support

Mating System
Homozygote x Homozygote

Appearance
black
Related Genotype: a/a

Citation
When using the Rag1<sup>tm1Mom</sup> mouse strain in a publication, please cite the originating article(s) and include JAX stock #002216 in your Materials and Methods section.
Facility Barrier Level Descriptions
- AX30 (Maximum)
- RB11 (Maximum)

Pricing & Availability

Sized to accommodate orders of up to 100 or more. Call Customer Service for details.

### Domestic
Pricing effective for USA, Canada and Mexico shipping destinations

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- All
- By Allele
- By Gene
- By Collection

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TOMORROW'S CURES