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
Researchers homozygous for the \( \text{Rag}^{1\text{tm}1\text{Mm}} \) mutation produce no mature T cells or B cells. Whereas \( \text{Prkdc}^{\text{scid}} \) homozygotes produce some B cells and IgM (i.e., are "leaky"), \( \text{Rag}^{1\text{tm}1\text{Mm}} \) homozygotes lack all mature lymphocytes (i.e., are "non-leaky"). Rag1 null mice have no CD3\(^+\) 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\(^-\)CD4\(^-\) 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.
**Genetic**

- **Rag1<sup>tm1Mom</sup>**

**Disease/Phenotype**

- **Disease Terms**
- **Research Areas By Phenotype**
- **Mammalian Phenotype Terms by Genotype**
- **References**

**Technical Support**

**Genotyping Protocols**

Standard PCR: Rag1Alternate1
Genotyping resources and troubleshooting

**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 KO mouse strain in a publication, please cite the originating article(s) and include JAX stock #002216 in your Materials and Methods section.
## Pricing & Availability

Ask Customer Service for an anticipated lead time

Please Inquire

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

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Email: TechTran@jax.org

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- By Allele
- By Gene
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