

BXSB.129S7(B6)-Rag1^{tm1Mom}/DcrJ

Stock No: 021571

 Congenic, Spontaneous Mutation, Targeted Mutation

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the spontaneous lupus-like autoimmune syndrome observed for BXSB/MpJ inbred mice. These BXSB.Rag1^{-/-} mice may be useful in studying the role of myeloid cells in autoimmune disease. Because BXSB.Rag1^{-/-} mice are genetically matched with the other BXSB-congenic strains, they are a model host for investigating the specific lymphocyte or bone marrow populations that transfer autoimmune disease.

Donating Investigator

Dr. Derry Roopenian, The Jackson Laboratory

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GENETIC OVERVIEW

Genetic Background

Generation

Rag1^{tm1Mom}

Alele Type

Gene Symbol

Gene Name

Targeted (Null/Knockout)

Rag1

recombination activating gene 1

VIEW GENETICS

RESEARCH APPLICATIONS

Immunology, Inflammation and Autoimmunity Research

Research Tools

Internal/Organ Research

Cancer Research

Hematological Research

Developmental Biology Research

Virology Research

VIEW ALL RESEARCH APPLICATIONS

BASE PRICE

Starting at:

\$2,854.50 Domestic price Cryo Recovery

VIEW PRICE LIST

Details

Detailed Description

Rag1-deficient BXSB.Yaa mice (BXSB.Rag1^{-/-} or BXSB.Yaa Rag1^{-/-}) are a BXSB/MpJ-congenic strain carrying a null mutation of the recombination activating gene 1.

BXSB/MpJ inbred males (Stock No. [000740](#)) develop a spontaneous lupus-like autoimmune syndrome: mortality starts at ~13 weeks of age with 50% lethality by ~30 weeks and 76% lethality by ~40 weeks. BXSB/MpJ inbred females develop a greatly attenuated form of autoimmune disease because they lack *Yaa*.

Homozygous (Rag1^{-/-}) mice are viable and fertile. Homozygotes produce no mature T cells or B cells, and should be maintained in pathogen-free conditions on sulfatrim water to increase colony health (similar to other immunodeficient strains). Compared to BXSB/MpJ, the lymphocyte-deficiency of BXSB.Rag1^{-/-} mice prevents manifestation of the spontaneous autoimmune phenotype in both males and females.

Heterozygous males (BXSB.Rag1^{+/-}) develop the BXSB/MpJ autoimmune phenotype. Heterozygous females develop a greatly attenuated form of autoimmune disease because they lack *Yaa*.

C57BL/6J-congenic mice harboring this Rag1 null allele are described and available from The Jackson Laboratory Repository as Stock No. [002216](#).

Development

Control Suggestions

Genetics

+ [Rag1^{tm1Mom}](#)

– Disease/Phenotype

+ [Disease Terms](#)

+ [Research Areas By Phenotype](#)

+ [Mammalian Phenotype Terms by Genotype](#)

+ [References](#)

– Technical Support

C O N T A C T T E C H N I C A L S U P P O R T

Genotyping Protocols

Standard PCR:[Rag1Alternate1](#)

[Genotyping resources and troubleshooting](#)

Breeding Considerations

To maintain the live colony, homozygous mice may be bred together. Homozygous animals of both sexes do not develop the spontaneous lupus-like autoimmune syndrome observed for BXSb/MpJ inbred mice (Stock No. [000740](#)). Homozygous mice are lymphocyte-deficient. As such, they should be maintained in pathogen-free conditions on sulfatrim water to increase colony health (similar to other immunodeficient strains). Heterozygotes will develop the sex-specific autoimmune phenotype of BXSb/MpJ. The expected coat color is white-bellied agouti.

[Additional Breeding and Husbandry Support](#)

Citation

When using the BXSb.129S7(B6)-*Rag1^{tm1Mom}*/DcrJ mouse strain in a publication, please [cite the originating article\(s\)](#) and include JAX stock #021571 in your Materials and Methods section.

Animal Health Reports

[Facility Barrier Level Descriptions](#)

Production of mice from cryopreserved embryos or sperm occurs in a maximum barrier room, [G200](#)

➔ Pricing & Availability



Cryo
Recovery

Typically mice are recovered in 10-14 weeks. Contact Customer Service to place an order or for more information.

Domestic | International

Pricing effective for USA, Canada and Mexico shipping destinations

CRYORECOVERY - DOMESTIC PRICING

SERVICE/PRODUCT	DESCRIPTION	PRICE
Cryo Recovery	Heterozygous for Rag1<tm1Mom>	\$2,854.50

RELATED PRODUCTS AND SERVICES

Frozen Mouse Embryo	BXSB.129S7(B6)-Rag1<tm1Mom>/DcrJ Frozen Embryos	\$2595.00
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The Jackson Laboratory has rigorous genetic quality control and mutant gene genotyping programs to ensure the genetic background of JAX® Mice strains as well as the genotypes of strains with identified molecular mutations. JAX® Mice strains are only made available to researchers after meeting our standards. However, the phenotype of each strain may not be fully characterized and/or captured in the strain data sheets. **Therefore, we cannot guarantee a strain's phenotype will meet all expectations.** To ensure that JAX® Mice will meet the needs of individual research projects or when requesting a strain that is new to your research, we suggest ordering and performing tests on a small number of mice to determine suitability for your particular project. We do not guarantee [breeding performance](#) and therefore suggest that investigators order more than one breeding pair to avoid delays in their research.

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Q U E S T I O N S A B O U T T E R M S O F U S E

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LICENSING INFORMATION

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