

BXSB.129(Cg)-*Il21r^{tm1Wjl}*/DcrJ

Stock No: **021568** | BXSB.Yaa/Il21r-KO

 Congenic, Targeted Mutation

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leukocytic, and kidney manifestations of the spontaneous lupus-like autoimmune syndrome observed for BXSB/MpJ inbred mice. These BXSB-Yaa/Il21r-/- mice may be useful in studying the role of IL-21 signaling in autoimmune disease.

Donating Investigator

Dr. Derry Roopenian, The Jackson Laboratory

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GENETIC OVERVIEW

Genetic Background

Generation

Il21r^{tm1Wjl}

Alele Type

Targeted (Null/Knockout)

Gene Symbol

Il21r

Gene Name

interleukin 21 receptor

Yaa

Alele Type

Spontaneous

Gene Symbol

Yaa

Gene Name

accelerated autoimmunity and lymphoproliferation transposition

VIEW GENETICS

RESEARCH APPLICATIONS

Research Tools

Immunology, Inflammation and Autoimmunity Research
Virology Research
Developmental Biology Research
Hematological Research
Cell Biology Research
Mouse/Human Gene Homologs
Internal/Organ Research

[VIEW ALL RESEARCH APPLICATIONS](#)

BASE PRICE

Starting at:

\$2,854.50 Domestic price Cryo Recovery

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[- Details](#)

[- Detailed Description](#)

IL-21R-deficient BXSB.Yaa mice (BXSB.Yaa/Il21r^{-/-} or BXSB.Yaa Il21r^{-/-}) are a BXSB/MpJ-congenic strain carrying a null mutation of the interleukin 21 receptor.

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 (IL-21R^{-/-}) mice are viable and fertile with normal lifespan. Homozygotes lack IL-21 signaling and have decreased immunoglobulin levels, decreased Th17 T cell differentiation, and decreased production of IL-17. Compared to BXSB/MpJ, the IL-21 signaling-deficiency of BXSB.Yaa/Il21r^{-/-} mice prevents the humoral, leukocytic, and kidney manifestations of the spontaneous autoimmune syndrome in both males and females.

Heterozygous males (BXSB.Yaa/IL-21R^{+/-}) develop the BXSB/MpJ autoimmune phenotype. Heterozygous females develop a greatly attenuated form of autoimmune disease because they lack *Yaa*.

[+ Development](#)

[+ Control Suggestions](#)

[+ Selected References](#)

– Genetics

+ [Il21^{tm1Wjl}](#)

+ [Yaa](#)

– 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:[Il21ralternate3](#)

Standard PCR:[Generic Neo](#)

Probe:[Generic Neo](#)

[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 autoimmune phenotype observed for BXSb/MpJ inbred mice (Stock No. [000740](#)). 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.Yaa/Il21r-KO mouse strain in a publication, please [cite the originating article\(s\)](#) and include JAX stock #021568 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



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 Il21r<tm1Wj>	\$2,854.50

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