

B6.129-Stat2^{tm1Shnd}/J

Stock No: **023309** | Stat2

 Congenic, Targeted Mutation

Live mice available in varying quantities. Ask Customer Service for details.

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flaviviruses such as Zika virus (ZIKV), dengue virus (DENV), and West Nile virus (WNV).

Donating Investigator

Christian Schindler, Columbia University

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GENETIC OVERVIEW

Genetic Background

Generation

?+pN2F1
(2020-07-06 00:00:00)

Stat2^{tm1Shnd}

Alele Type

Targeted (Null/Knockout)

Gene Symbol

Stat2

Gene Name

signal transducer and activator of transcription 2

VIEW GENETICS

RESEARCH APPLICATIONS

Cell Biology Research

Immunology, Inflammation and Autoimmunity Research

VIEW ALL RESEARCH APPLICATIONS

BASE PRICE

Starting at:

\$255.00 Domestic price for female

V I E W P R I C E L I S T

Details

Detailed Description

In this strain, a neo cassette replaces exons 2-4 of the signal transducer and activator of transcription 2 (*Stat2*) gene, abolishing gene function. STAT2 is a transcriptional activator induced by cytokines and growth factors. Once activated, STAT2 translocates to the nucleus where it associates with p48 and forms the transcriptional activator complex, interferon-stimulated gene factor 3 (ISGF3). After binding to the IFN stimulated response element (ISRE), ISGF3 is able to activate the transcription of interferon stimulated genes. Homozygous mice are viable and fertile when maintained under SPF conditions. Homozygous *Stat2*^{-/-} mice fail to mount transcriptional responses to IFN α or IFN β . These mice show increased susceptibility to vesicular stomatitis virus (VSV) infection and Dengue virus (DENV) infection. They are also more susceptible to LPS-induced sepsis, resulting in mortality due to peritonitis and hepatitis. LPS-induction results in a down-regulation of inflammatory cytokines and chemokines such as TNF α , IL-6, IL-12, IL10, and INF γ .

Recent studies show that STAT2 also plays a role in resistance to other flaviviruses such as Zika virus (ZIKV) and West Nile virus (WNV).

Development

Control Suggestions

Selected References

Genetics

Stat2^{tm1Shnd}

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:[Generic Neo](#)

Probe:[Generic Neo](#)

Standard PCR:[Stat2 Alternate1](#)

[Genotyping resources and troubleshooting](#)

Dietary Information

LabDiet® 5K52 formulation (6% fat)

Breeding Considerations

When maintaining a live colony, homozygous mice may be bred together in a specific pathogen-free (SPF) facility.

[Additional Breeding and Husbandry Support](#)

Mating System

Homozygote x Homozygote

Citation

When using the Stat2^{-/-} mouse strain in a publication, please [cite the originating article\(s\)](#) and include JAX stock #023309 in your Materials and Methods section.

Animal Health Reports

[Facility Barrier Level Descriptions](#)

 [FGB29 \(Standard\)](#)

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Available

Domestic | **International**

Pricing effective for USA, Canada and Mexico shipping destinations

LIVE MOUSE

AGE	SEX	GENOTYPE	PRICE
Approx 4-8 weeks	Female	Homozygous for Stat2 ^{tm1Shnd}	\$255.00

SEX

Homozygous for Stat2^{tm1Shnd}

\$255.00

RELATED PRODUCTS AND SERVICES

[Frozen Mouse Embryo](#)

B6.129-Stat2<tm1Shnd>/J Frozen Embryo

\$2595.00

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