

C57BL/6-Stat2^{tm1.1(STAT2)^{Diam}}/AgsaJ

Stock No: **031630** | hSTAT2 KI , C57BL/6 hSTAT2 KI , human STAT2 knock-in

 **Coisogenic, Targeted Mutation**

Live colonies will be removed soon

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C57BL/6 hSTAT2 KI mice have the human STAT2 knock-in allele on the C57BL/6 genetic background. Humanized STAT2 knock-in mice are useful for studying immune system cytokine signaling. More specifically, because they overcome the inherent inability of Zika virus (ZIKV) to bind and degrade mouse STAT2, C57BL/6 hSTAT2 KI homozygotes are an immunocompetent C57BL/6 mouse model for studying ZIKV pathogenesis.

Donating Investigator

Adolfo Garcia-Sastre, Icahn School of Medicine At Mount Sinai

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GENETIC OVERVIEW

Genetic Background

Generation

?+pN1F2
(2019-11-01 00:00:00)

Stat2^{tm1.1(STAT2)^{Diam}}

Alele Type

Targeted (Inserted expressed sequence, Humanized sequence)

Gene Symbol

Stat2

Gene Name

signal transducer and activator of transcription 2

VIEW GENETICS

RESEARCH APPLICATIONS

- Virology Research
- Immunology, Inflammation and Autoimmunity Research
- Research Tools
- Cell Biology Research
- Cancer Research

BASE PRICE

Starting at:

\$255.00 Domestic price for female 4-week

\$2,854.50 Domestic price Cryo Recovery

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Details

Detailed Description

STAT2 is a member of the signal transducer and activator of transcription (STAT) protein family members. In response to cytokines and growth factors (e.g., interferon [IFN]), STAT proteins are phosphorylated and then form complexes that translocate to the cell nucleus where they act as transcription activators. Although the Zika virus (ZIKV) NS5 protein evades the human IFN signaling response by binding to and degrading STAT2, it is unable to bind efficiently to mouse STAT2 and thus lacks the ability to antagonize the mouse IFN response.

C57BL/6 hSTAT2 KI mice have the human STAT2 knock-in allele on the C57BL/6 genetic background. The human STAT2 knock-in allele has the endogenous mouse *Stat2* coding sequence (spanning from part of exon 2 through part of exon 24) replaced with the corresponding human *STAT2* coding sequences. Western blot of splenocytes stimulated with poly(I:C) confirmed the loss of mouse STAT2 and the expression of human STAT2.

Both heterozygous and homozygous mice are viable and fertile with no developmental, behavioral or reproductive abnormalities.

Because C57BL/6 hSTAT2 KI homozygotes express human STAT2 in place of mouse STAT2, they are an immunocompetent C57BL/6 mouse model useful for studying ZIKV pathogenesis - allowing researchers to overcome the inherent inability of ZIKV strains to bind and degrade mouse STAT2.

Development

Control Suggestions

Selected References

Genetics

– 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:[Stat2](#)

[Genotyping resources and troubleshooting](#)

Dietary Information

LabDiet® 5K52/5K67

Breeding Considerations

Both heterozygous and homozygous mice are viable and fertile with no developmental, behavioral or reproductive abnormalities. When maintaining a live colony, heterozygous mice may be bred together, to wildtype mice from the colony or to C57BL/6J inbred mice (Stock No. [000664](#)). Alternatively, homozygous mice may be bred together.

[Additional Breeding and Husbandry Support](#)

Mating System

Homozygote x Homozygote

Citation

When using the hSTAT2 KI , C57BL/6 hSTAT2 KI , human STAT2 knock-in mouse strain in a publication, please [cite the originating article\(s\)](#) and include JAX stock #031630 in your Materials and Methods section.

Animal Health Reports

[Facility Barrier Level Descriptions](#)

 [AX18 \(Maximum\)](#)

➔ Pricing & Availability



Live colonies will be removed soon

Available

Domestic **International**

Pricing effective for USA, Canada and Mexico shipping destinations

LIVE MOUSE			
AGE	SEX	GENOTYPE	PRICE
4 weeks	Female	Homozygous for Stat2 ^{tm1.1(STAT2)Diam}	\$255.00
	Male	Homozygous for Stat2 ^{tm1.1(STAT2)Diam}	\$255.00
5 weeks	Female	Homozygous for Stat2 ^{tm1.1(STAT2)Diam}	\$255.00
	Male	Homozygous for Stat2 ^{tm1.1(STAT2)Diam}	\$255.00
6 weeks	Female	Homozygous for Stat2 ^{tm1.1(STAT2)Diam}	\$255.00
	Male	Homozygous for Stat2 ^{tm1.1(STAT2)Diam}	\$255.00
7 weeks	Female	Homozygous for Stat2 ^{tm1.1(STAT2)Diam}	\$255.00
	Male	Homozygous for Stat2 ^{tm1.1(STAT2)Diam}	\$255.00
8 weeks	Female	Homozygous for Stat2 ^{tm1.1(STAT2)Diam}	\$255.00
	Male	Homozygous for Stat2 ^{tm1.1(STAT2)Diam}	\$255.00
9 weeks	Female	Homozygous for Stat2 ^{tm1.1(STAT2)Diam}	\$255.00
	Male	Homozygous for Stat2 ^{tm1.1(STAT2)Diam}	\$255.00
10 weeks	Female	Homozygous for Stat2 ^{tm1.1(STAT2)Diam}	\$255.00
	Male	Homozygous for Stat2 ^{tm1.1(STAT2)Diam}	\$255.00
11 weeks	Female	Homozygous for Stat2 ^{tm1.1(STAT2)Diam}	\$255.00
	Male	Homozygous for Stat2 ^{tm1.1(STAT2)Diam}	\$255.00
12 weeks	Female	Homozygous for Stat2 ^{tm1.1(STAT2)Diam}	\$255.00
	Male	Homozygous for Stat2 ^{tm1.1(STAT2)Diam}	\$255.00

CRYORECOVERY - DOMESTIC PRICING

SERVICE/PRODUCT	DESCRIPTION	PRICE
Cryo Recovery	Heterozygous for Stat2^{tm1.1(STAT2)Diam}	\$2,854.50

RELATED PRODUCTS AND SERVICES

Frozen Mouse Embryo	C57BL/6-Stat2^{tm1.1(STAT2)Diam}/AgsaJ	\$2595.00
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