The Jackson Laboratory

B6;129S-*Scarb1* ^{tm1Kri} /J

Stock No: **003379** | SR-BI KO

Targeted Mutation

Live colonies will be removed soon

PLACE LAST ORDER

Email Download PDF Help

Removal of this mouse colony is imminent. If live mice are needed for your studies, it is advised that they be ordered immediately. After removal, the mice will be available from cryorecovery.

Knock-out mice for the scavenger receptor class B, member 1 (*Scarb1*^{tm1Kri}) exhibit increases in in plasma cholesterol (primarily HDL) as compared to wild type controls, and decreases in cholesterol levels in adrenal tissue.

Donating Investigator

Dr. Monty Krieger, Massachusetts Institute of Technology

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GENETIC OVERVIEW

Genetic Background	Generation
	N1F8 (2020-11-10 00:00:00)

Scarb1^{tm1Kri}

Allele Type	Gene Symbol	Gene Name
Targeted (Null/Knockout)	*Scarb1*	scavenger receptor class B, member 1

VIEW GENETICS

RESEARCH APPLICATIONS

Cardiovascular Research
Reproductive Biology Research
Metabolism Research

VIEW ALL RESEARCH APPLICATIO

BASE PRICE

Starting at:

$278.00 Domestic price for female 4-week

356.51 Domestic price for breeder pair

$2,854.50 Domestic price Cryo Recovery

VIEW PRICE LIST

Details

Detailed Description

The class B, type I scavenger receptor (Srb1 or Scarb1) is a cell surface HDL receptor that can recognize the apolipoproteins on the surface of the HDL particle. It plays a key role in determining the levels of plasma lipoprotein cholesterol (primarily HDL) and the accumulation of cholesterol stores in the adrenal gland.In this strain plasma cholesterol (primarily HDL) concentrations increase by 125% in homozygotes and 31% in heterozygotes, as compared to wild type controls. Also, cholesterol levels in adrenal tissue in homozygous and heterozygous mutants decrease by 72% and 42% respectively, relative to wild type controls. The plasma concentration of Apoa-I, the major protein in HDL, is unchanged in mutant animals, relative to wild type controls.

On a mixed genetic background (B6;129), homozygous females are infertile and homozygous males are fertile. As of 2008, the donating investigator reported that on a mixed genetic background (B6;129), breeding heterozygotes together yielded less homozygous pups (~12.5%) than predicted Mendelian ratio. By 2016, The Jackson Laboratory live colony had been maintained by several generations of breeding heterozygotes together and/or to wildtype siblings (generation F39-40). In addition, some pedigree lines had been backcrossed 1-2 generations onto C57BL/6J (during rederivation, etc.). At that time, some instances were reported that heterozygous matings were failing to generate live homozygotes. Of note, the donating investigator reported that similar breedings using C57BL/6-congenic *Scarb1*^{tm1Kri} (generation N9, not at The Jackson Laboratory) resulted in embryonic death of all homozygotes. Taken together, this suggests that mice homozygous for this Scarb1 knock-out allele have increased incidence of embryonic lethality associated with continued backcrossing onto C57BL/6. In response, The Jackson Laboratory will not maintain the pedigree lines backcrossed onto C57BL/6J. In 2017, re-establishment of a mixed B6;129 genetic background (closer to 50% C57BL/6 : 50% 129S1) resulted in heterozygous breeders producing homozygous offspring (both females and males) at ratios approaching Mendelian expectations.

Of note, a similar strain, *Srb1*^{deltaCT} (Stock No. 032062), containing a premature stop codon in exon 12, is viable and fertile as homozygotes.

Development

Control Suggestions

Selected References

Genetics

Scarb1^{tm1Kri}

Disease/Phenotype

Disease Terms

Research Areas By Phenotype

Mammalian Phenotype Terms by Genotype

References

Technical Support

CONTACT TECHNICAL SUPPORT

Genotyping Protocols

Standard PCR:Scarb1

Genotyping resources and troubleshooting

Dietary Information

LabDiet® 5K52 formulation (6% fat)

Breeding Considerations

On a mixed genetic background (B6;129), homozygous females are infertile and homozygous males are fertile. As of 2008, the donating investigator reported that on a mixed genetic background (B6;129), breeding heterozygotes together yielded fewer homozygous pups (~12.5%) than predicted Mendelian ratio. In addition, evidence in 2016 from a colony not at The Jackson Laboratory suggested that mice homozygous for this Scarb1 knock-out allele had increased incidence of embryonic lethality associated with continued backcrossing onto C57BL/6. In 2017, the live colony at The Jackson Laboratory was bred one generation to 129S1/SvImJ inbred mice (Stock No. 002448) to re-establish a mixed B6;129 genetic background (closer to 50% C57BL/6 : 50% 129S1). This resulted in heterozygous breeders producing homozygous offspring (both females and males) at ratios approaching Mendelian expectations. Thereafter, when maintaining our live colony at The Jackson Laboratory, heterozygous mice may be bred with wildtype mice from the colony; avoiding any backcross onto C57BL/6 (2017).
On a mixed genetic background (B6;129), the expected coat color from breeding is black or agouti.

Of note, a similar strain, *Srb1*^{deltaCT} (Stock No. 032062), containing a premature stop codon in exon 12, is viable and fertile as homozygotes.

Additional Breeding and Husbandry Support

Mating System

Heterozygote x +/+ sibling
+/+ sibling x Heterozygote

Citation

When using the SR-BI KO mouse strain in a publication, please cite the originating article(s) and include JAX stock #003379 in your Materials and Methods section.

Animal Health Reports

Facility Barrier Level Descriptions

AX11 (Maximum)

Pricing & Availability

Available

Live colonies will be removed soon

Domestic **International**

Pricing effective for USA, Canada and Mexico shipping destinations

LIVE MOUSE

AGE	SEX	GENOTYPE	PRICE
4 weeks	Female	Heterozygous for Scarb1^{tm1Kri}	$278.00
	Male	Heterozygous for Scarb1^{tm1Kri}	$278.00
4 weeks	Female	Wild-type for Scarb1^{tm1Kri}	$78.51
	Male	Wild-type for Scarb1^{tm1Kri}	$78.51
5 weeks	Female	Heterozygous for Scarb1^{tm1Kri}	$278.00
	Male	Heterozygous for Scarb1^{tm1Kri}	$278.00
5 weeks	Female	Wild-type for Scarb1^{tm1Kri}	$78.51
	Male	Wild-type for Scarb1^{tm1Kri}	$78.51
6 weeks	Female	Heterozygous for Scarb1^{tm1Kri}	$278.00
	Male	Heterozygous for Scarb1^{tm1Kri}	$278.00
6 weeks	Female	Wild-type for Scarb1^{tm1Kri}	$78.51
	Male	Wild-type for Scarb1^{tm1Kri}	$78.51
7 weeks	Female	Heterozygous for Scarb1^{tm1Kri}	$278.00
	Male	Heterozygous for Scarb1^{tm1Kri}	$278.00
7 weeks	Female	Wild-type for Scarb1^{tm1Kri}	$78.51
	Male	Wild-type for Scarb1^{tm1Kri}	$78.51
		^{tm1Kri}	

	SEX		
8 weeks	Female	Heterozygous for Scarb1^{tm1Kri}	$278.00
	Male	Heterozygous for Scarb1^{tm1Kri}	$278.00
8 weeks	Female	Wild-type for Scarb1^{tm1Kri}	$78.51
	Male	Wild-type for Scarb1^{tm1Kri}	$78.51
9 weeks	Female	Heterozygous for Scarb1^{tm1Kri}	$278.00
	Male	Heterozygous for Scarb1^{tm1Kri}	$278.00
9 weeks	Female	Wild-type for Scarb1^{tm1Kri}	$78.51
	Male	Wild-type for Scarb1^{tm1Kri}	$78.51
10 weeks	Female	Heterozygous for Scarb1^{tm1Kri}	$278.00
	Male	Heterozygous for Scarb1^{tm1Kri}	$278.00
10 weeks	Female	Wild-type for Scarb1^{tm1Kri}	$78.51
	Male	Wild-type for Scarb1^{tm1Kri}	$78.51
11 weeks	Female	Heterozygous for Scarb1^{tm1Kri}	$278.00
	Male	Heterozygous for Scarb1^{tm1Kri}	$278.00
11 weeks	Female	Wild-type for Scarb1^{tm1Kri}	$78.51
	Male	Wild-type for Scarb1^{tm1Kri}	$78.51
12 weeks	Female	Heterozygous for Scarb1^{tm1Kri}	$278.00
	Male	Heterozygous for Scarb1^{tm1Kri}	$278.00
12 weeks	Female	Wild-type for Scarb1^{tm1Kri}	$78.51
	Male	Wild-type for Scarb1^{tm1Kri}	$78.51

BREEDER PAIR

SEX	GENOTYPE	PRICE
Female	Heterozygous for Scarb1^{tm1Kri}	$556.00
Male	Heterozygous for Scarb1^{tm1Kri}	
Female	Heterozygous for Scarb1^{tm1Kri}	$356.51
Male	Wild-type for Scarb1^{tm1Kri}	
Female	Wild-type for Scarb1^{tm1Kri}	$356.51
Male	Heterozygous for Scarb1^{tm1Kri}	

CRYORECOVERY - DOMESTIC PRICING

SERVICE/PRODUCT	DESCRIPTION	PRICE
Cryo Recovery	Heterozygous or wildtype for Scarb1<tm1Kri>	$2,854.50

RELATED PRODUCTS AND SERVICES

Frozen Mouse Embryo	B6;129S2-Scarb1<tm1Kri>/J	$2595.00

PAYMENT TERMS AND CONDITIONS

Terms are granted by individual review and stated on the customer invoice(s) and account statement. These transactions are payable in U.S. currency within the granted terms. Payment for services, products, shipping containers, and shipping costs that are rendered are expected within the payment terms indicated on the invoice or stated by contract. Invoices and account balances in arrears of stated terms may result in The Jackson Laboratory pursuing collection activities including but not limited to outside agencies and court filings.

THE JACKSON LABORATORY'S GENOTYPE PROMISE

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.

Terms Of Use

TERMS OF USE

General Terms and Conditions

QUESTIONS ABOUT TERMS OF USE

ADDITIONAL USE RESTRICTIONS APPLY

Use of MICE by non-profits requires a Material Transfer Agreement (MTA) and for-profit entities require a license.

LICENSING INFORMATION

Phone: 207-288-6470
Email: TechTran@jax.org

Related Strains

All

By Allele

By Gene

By Collection