

B6.Cg-Mirc1^{tm4.1Aven}/J

Stock No: **027322**

 Congenic, Targeted Mutation

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

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Donating Investigator

Andrea Ventura, Memorial Sloan Kettering Cancer Center

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GENETIC OVERVIEW

Genetic Background

Generation

Mirc1^{tm4.1Aven}

Allele Type

Gene Symbol

Gene Name

Targeted (Null/Knockout)

Mirc1

microRNA cluster 1, including Mir17 through Mir92-1

VIEW GENETICS

RESEARCH APPLICATIONS

VIEW ALL RESEARCH APPLICATIONS

BASE PRICE

Starting at:

Details

Detailed Description

The polycistronic *Mirc1*, microRNA cluster, or miR-17~92, consists of 6 members: *Mir17*, microRNA 17; *Mir18*, microRNA 18; *Mir19a*, microRNA 19a; *Mir20a*, microRNA 20a; *Mir19b-1*, microRNA 19b-1; and *Mir92-1*, microRNA 92-1. The region of nucleotides 2–7 from the mature miRNA 5′-end is called the miRNA seed sequence, which is essential for target recognition and binding to mRNA. The same seed sequence is often shared amongst miRNAs within the same family.

These miR-17~92^{Δ17,18,92} mice have the miR-17 (*Mir17* & *Mir20a*), miR-18 (*Mir18*), and miR-92-1 (*Mir92-1*) seed families knocked out of the *Mirc1*, microRNA cluster.

No *Mir17*, *Mir20a*, *Mir18*, or *Mir92-1* miRNAs are detected by RT-qPCR and small RNA sequencing analysis of tail tissue from homozygotes. Mice that are heterozygous for the targeted mutation are viable and fertile on the mixed B6;129 background, and smaller in size than wildtype controls. miR-17~92^{Δ17,18,92} mice exhibit a phenotype similar to miR-17~92^Δ mice (see Stock No. 008459).

Homozygotes exhibit perinatal lethality, absent fifth mesophalanx, and lung hypoplasia. Vertebral and carpal bone fusion, cleft palate and delayed ossification is observed in homozygotes on the C57BL/6J background. Homeotic transformations of one or more vertebrae are fully penetrant in homozygotes. The severity of the phenotype (including perinatal lethality) in homozygotes increases when the mice are backcrossed to C57BL/6.

This strain is part of a miR-17~92 (*Mirc1*, microRNA cluster 1, including Mir17 through Mir92-1) allelic series: (Stock No. 027317), (Stock No. 027318), (Stock No. 027319), (Stock No. 027320), (Stock No. 027321), (Stock No. 027322).

Development

Control Suggestions

Selected References

Genetics

Mirc1^{tm4.1Aven}

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:[Mirc1](#)

[Genotyping resources and troubleshooting](#)

Breeding Considerations

When maintaining a live colony, heterozygous mice may be bred together, to wildtype siblings, or to C57BL/6J inbred mice (Stock No. [000664](#)). Homozygotes have a perinatal lethal phenotype.

[Additional Breeding and Husbandry Support](#)

Mating System

Wild-type x Heterozygote

Heterozygote x Wild-type

Citation

When using the B6.Cg-*Mirc1*^{tm4.1Aven}/J mouse strain in a publication, please [cite the originating article\(s\)](#) and include JAX stock #027322 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

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CRYORECOVERY - DOMESTIC PRICING

SERVICE/PRODUCT	DESCRIPTION	PRICE
Cryo Recovery	Heterozygous or wildtype for Mirc1<tm4.1Aven>	\$2,854.50

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