



# B 6 . CM*mir-17<sup>tm31Aven</sup>* / J

Stock No: 027321

Congenic, Targeted Mutation



CRYO RECOVERY

P L A C E O R D E R

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

## Overview

This miR-17~92<sup>Δ17,18</sup> knock-out strain is useful in studies of the miR-17 (*Mir19a* & *Mir19b-1*), and miR-18 (*Mir18*) seed families, the *Mirc1* microRNA cluster, Feingold syndrome, tumorigenesis and tumor progression.

### Donating Investigator

Andrea Ventura, Memorial Sloan Kettering Cancer Center

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## GENETIC OVERVIEW

Genetic Background

Generation

*Mirc1<sup>tm3.1Aven</sup>*

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:

\$2,854.50 Domestic price Cryo Recovery

VIEW PRICE LIST

### 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<sup>Δ17,18</sup> mice have the miR-17 and miR-18 seed families (*Mir17* & *Mir20a* and *Mir18*) knocked out of the *Mirc1*, microRNA cluster.

No *Mir17*, *Mir20a*, or *Mir18* miRNAs are detected by RT-qPCR and small RNA sequencing analysis of tail tissue from homozygotes. Mice that are homozygous for the targeted mutation are viable and fertile on the mixed B6;129 background. miR-17~92<sup>Δ17,18</sup> mice exhibit a more severe phenotype than miR-17~92<sup>Δ17</sup> mice. Mendelian frequency for homozygotes on the C57BL/6J background is lower than expected (3%). More than half of homozygotes on the C57BL/6J background (N7 on the C57BL/6 background) exhibit vertebral fusion and transformation, and 21% exhibit carpal bone fusion. Heterozygotes and homozygotes are smaller in size than wildtype controls, and on the C57BL/6 background (N7) exhibit shortened fifth mesophalanx bones. Homeotic transformations of one

or more vertebrae are fully penetrant in homozygotes. Pre-B-cell number is reduced in homozygotes on the B6;129 background, while ossification is delayed in homozygotes on the B6 background. 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*<sup>tm3.1Aven</sup>

## - Disease/Phenotype

### + Disease Terms

### + Research Areas By Genotype

### + Mammalian Phenotype Terms by Genotype

### + References

## - Technical Support

C H A T   O  F L I N E

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](#)<sup>tm1.1Aven</sup>

Standard PCR:[Mirc1](#)<sup>tm3.1Aven</sup>

[Genotyping resources and troubleshooting](#)

## Breeding Considerations

When maintaining a live colony, these mice can be bred as homozygotes. The severity of the phenotype (including perinatal lethality) in homozygotes increases when the mice are backcrossed to C57BL/6.

[Additional Breeding and Husbandry Support](#)

## Citation

When using the B6.Cg-Mirc1<sup>tm3.1Aven</sup>/J mouse strain in a publication, please [cite the originating article\(s\)](#) and include JAX stock #027321 in your Materials and Methods section.

[Facility Barrier Level Descriptions](#)  
*Production of mice from cryopreserved embryos or sperm occurs in a maximum barrier room, G200*

## ➔ Pricing & Availability



Cryo Recovery

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	GENOTYPE	PRICE
Cryo Recovery	Heterozygous or wildtype for Mirc1<tm3.1Aven>	\$2,854.50

We will fulfill your order by providing at least two carriers for each strain ordered. The total number, sex, and genotypes provided will vary, although typically 8 or more animals are provided. Please check genotypes which will be recovered. While the genotypes of all animals produced will be communicated to you prior to scheduling shipment, the genotypes of animals provided may not reflect the mating scheme and genotypes described in the strain description. Animals are typically ready to ship in 11-14 weeks. If a second recovery is required to produce the minimum number of animals, then delivery time would increase to approximately 25 weeks. If we fail to produce animals of the correct genotype, you will not be charged. We cannot guarantee the reproductive success of mice shipped to your facility. If the mice are lost after the first three days (post-arrival) or do not produce progeny at your facility, a new order and fee will be necessary.

Cryorecovery to establish a [Dedicated Supply](#) for greater quantities of mice. Mice recovered can be used to establish a dedicated colony to contractually supply you mice according to your requirements. Price by quotation.

### Related Products and Services

Frozen Mouse Embryo	B6.Cg-Mirc1<tm3.1Aven>/J	\$2595.00
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## 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.

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Email: [TechTran@jax.org](mailto:TechTran@jax.org)

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By Allele

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