

**C57BL/6-Actb<sup>tm3.1(Sirt1)Npa</sup> /J**Stock No: **013080** **Coisogenic, 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

Leonard P Guarente, Massachusetts Institute of Technology

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## GENETIC OVERVIEW

**Genetic Background****Generation***Actb<sup>tm3.1(Sirt1)Npa</sup>***Alele Type**Targeted (Inserted  
expressed sequence)**Gene Symbol***Actb***Gene Name**

actin, beta

[VIEW GENETICS](#)

## RESEARCH APPLICATIONS

Developmental Biology Research

Cell Biology Research

Internal/Organ Research

Endocrine Deficiency Research

Reproductive Biology Research

Research Tools

Diabetes and Obesity Research

Cardiovascular Research

[VIEW ALL RESEARCH APPLICATIONS](#)

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## BASE PRICE

Starting at:

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\$2,854.50 Domestic price Cryo Recovery

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V I E W   P R I C E   L I S T

### Details

#### Detailed Description

Mice that are heterozygous for the targeted mutation are viable, exhibit delayed reproduction and lower body weight. No homozygotes are produced from heterozygous crosses. Fewer than expected heterozygotes are produced from heterozygote X wildtype crosses. Overexpression of gene product (protein) is detected by Western blot analysis of white adipose tissue, brown adipose tissue, MEFs, skull calvaria cells and brain tissue. Overexpression of the protein is not detected in liver or muscle tissue. Fusion gene product (mRNA) is detected in white adipose tissue by Northern blot analysis. Beta-actin protein expression is equivalent to wildtype levels. Heterozygote knock-in mice have reduced fat mass (epididymal fat pad weight), circulating free fatty acids, leptin, adiponectin and total cholesterol. Food consumption, glucose tolerance and metabolic rate (with associated higher oxygen consumption) are increased in the mutant mice. In fasted conditions, heterozygotes have lower circulating glucose levels than controls. In fed condition, heterozygotes have lower circulating insulin levels than controls.

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#### Development

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#### Expression Data

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#### Control Suggestions

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#### Selected References

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### Genetics

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#### *Actb*<sup>tm3.1(Sirt1)Npa</sup>

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## ⊖ Disease/Phenotype

[+ Disease Terms](#)

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[+ Research Areas By Phenotype](#)

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[+ Mammalian Phenotype Terms by Genotype](#)

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[+ References](#)

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## ⊖ 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:[Actb](#)

Standard PCR:[Actb](#)

[Genotyping resources and troubleshooting](#)

### Breeding Considerations

When maintaining a live colony, these mice can be bred as heterozygotes. No homozygotes are produced from heterozygous crosses. Fewer than expected heterozygotes are produced from heterozygote X wildtype crosses. Heterozygous mice exhibit delayed reproduction.

[Additional Breeding and Husbandry Support](#)

### Citation

When using the C57BL/6-*Actb*<sup>tm3.1(Sirt1)*Npa*</sup>/J mouse strain in a publication, please [cite the originating article\(s\)](#) and include JAX stock #013080 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



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/PRODUCT	DESCRIPTION	PRICE
Cryo Recovery	Heterozygous or wildtype for Actb<tm3.1(Sirt1)Npa>	\$2,854.50

### RELATED PRODUCTS AND SERVICES

Frozen Mouse Embryo	C57BL/6-Actb<tm3.1(Sirt1)Npa>/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.

## 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 companies or for-profit entities requires a license prior to shipping.](#)

### LICENSING INFORMATION

## ☰ Related Strains

- All
- By Allele
- By Gene
- By Collection




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