

**B6.Cg-Mcoln1<sup>tm1Sas1</sup>/J**

Stock No: **027110** | Mcoln1

 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

Susan Slaughaupt, Harvard Medical School

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## GENETIC OVERVIEW

Genetic Background      Generation

*Mcoln1<sup>tm1Sas1</sup>*

Alele Type	Gene Symbol	Gene Name
Targeted (Null/Knockout)	<i>Mcoln1</i>	mucolipin 1

VIEW GENETICS

## RESEARCH APPLICATIONS

Sensorineural Research  
Cell Biology Research  
Neurobiology Research  
Developmental Biology Research

VIEW ALL RESEARCH APPLICATIONS

## BASE PRICE

Starting at:

\$2,854.50 Domestic price Cryo Recovery

V I E W P R I C E L I S T

### Details

#### Detailed Description

*Mcoln1*<sup>-/-</sup> mice contain a neo cassette replacing exons 3-4 and part of exon 5 of the mucolipin 1 (*Mcoln1*) gene, abolishing gene expression. *Mcoln1* encodes a transmembrane cation channel localized to intracellular vesicular membranes including lysosomes, and functions in the late endocytic pathway and in the regulation of lysosomal exocytosis. Mutations in MCOLN1 have been associated with Mucopolipidosis type IV (MLIV), an autosomal recessive lysosomal storage disorder characterized by severe mental retardation, delayed motor milestones, ophthalmologic abnormalities, constitutive achlorhydria, and elevated plasma gastrin levels. Homozygotes are viable and fertile with a median age of 8 months. Mice exhibit numerous dense inclusion bodies in all cell types in brain, elevated plasma gastrin, vacuolization in parietal cells, and retinal degeneration. They have neurological defects as evident by gait deficits at 6.5 months of age, leading to complete hind-limb paralysis in 3-4 weeks. They also exhibit limb claspings at 3 months, loss of subcutaneous fat, and decreased muscle mass at the end-stage.

#### Development

#### Control Suggestions

#### Selected References

### Genetics

#### *Mcoln1*<sup>tm1Sasl</sup>

### Disease/Phenotype

#### Disease Terms

#### 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:[Mcoln1alternate3](#)

[Genotyping resources and troubleshooting](#)

### Breeding Considerations

When maintaining a live colony, heterozygous mice may be bred to wildtype mice from the colony. Homozygous mice develop hind-limb paralysis by 6.5 months of age and have an average life expectancy of 8 months.

[Additional Breeding and Husbandry Support](#)

#### Mating System

Heterozygote x Wild-type

Wild-type x Heterozygote

#### Citation

When using the Mcoln1<sup>-</sup> mouse strain in a publication, please [cite the originating article\(s\)](#) and include JAX stock #027110 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](#)*

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## [- 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/PRODUCT	DESCRIPTION	PRICE
<a href="#">Cryo Recovery</a>	Heterozygous or wildtype for -Mcoln1<tm1Sas>	\$2,854.50

RELATED PRODUCTS AND SERVICES		
<a href="#">Frozen Mouse Embryo</a>	B6.Cg-Mcoln1<tm1Sas>/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

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Q U E S T I O N S   A B O U T   T E R M S   O F   U S E

### ADDITIONAL USE RESTRICTIONS APPLY

[Use of MICE by companies or for-profit entities requires a license prior to shipping.](#)

### LICENSING INFORMATION

Phone: 207-288-6470

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

## Related Strains

All

By Allele

By Gene

By Collection



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# TOMORROW'S CURES



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