

STOCK *Bmi1^{tm1.1Sjm}* / J

Stock No: 028974 | *Bmi1^{fl}*

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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Exons 1 and 2 of the mouse *Bmi1* gene are flanked by loxP sites in this conditional knockout allele. This strain has been useful in studies of stem cell and neurosphere-initiating cells in the adult mouse forebrain.

Donating Investigator

Sean J Morrison, University of Texas Southwestern Medical Center

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GENETIC OVERVIEW

Genetic Background

Generation

Bmi1^{tm1.1Sjm}

Alele Type

Gene Symbol

Gene Name

Targeted (Conditional ready
(e.g. floxed))

Bmi1

Bmi1 polycomb ring finger oncogene

VIEW GENETICS

RESEARCH APPLICATIONS

Research Tools

Neurobiology 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

Exons 1 and 2 of the mouse *Bmi1* (Bmi1 polycomb ring finger oncogene) gene are flanked by loxP sites in this *Bmi1^{fl}* conditional knockout allele. Cre-mediated excision of the floxed region results in a knockout allele.

Crosses with nestin-cre animals (see Stock No. [003771](#)) excise the floxed sequence broadly throughout the neuroepithelium by E10.5. The compound mutant mice exhibit loss of BMI1 protein in the cortex and subventricular zone (SVZ), as determined by western blot, and *Bmi1* transcripts in SVZ cells, $\text{Glast}^{\text{mid}}$ $\text{EGFR}^{\text{high}}$ $\text{PlexinB2}^{\text{high}}$ CD24^{low} $\text{O4/PSA-NCAM}^{\text{low}}$ $\text{Ter119}^{\text{low}}$

CD45^{low} (GEP/COT) cells, and pre-GEP/COT cells, as determined by qRT-PCR. *Nestin-Cre; Bmi1^{fl/fl}* mice can live for up to 2 years, but exhibit neurological deficits (e.g. ataxia) that worsen as they age. Their brain morphology appears relatively normal, but brain size is reduced. Data indicates that *Bmi1* is required for the maintenance of pre-GEP/COT quiescent neural stem cells and GEP/COT neurosphere-initiating cells *in vivo*.

Development

Control Suggestions

Selected References

Genetics

Bmi1^{tm1.1Sjm}

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: [Bmi1 Alternate 1](#)

[Genotyping resources and troubleshooting](#)

Breeding Considerations

Heterozygous and homozygous floxed mice are viable and fertile.

[Additional Breeding and Husbandry Support](#)

Mating System

Homozygote x Homozygote

Citation

When using the *Bmi1^{fl}* mouse strain in a publication, please [cite the originating article\(s\)](#) and include JAX stock #028974 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

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 for Bmi1<tm1.1Sjm>	\$2,854.50

RELATED PRODUCTS AND SERVICES

Frozen Mouse Embryo	STOCK Bmi1<tm1.1Sjm>/J Frozen Embryo	\$2595.00
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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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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

Related Strains

All

By Allele

By Gene

By Collection



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