

B6.129S7-*Mgp*^{tm1Kry}/KbosJ

Stock No: **023811**

 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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the vascular media and endothelium. These *Mgp*^{m1} mice may be useful for studying arterial calcification.

Donating Investigator

Kristina Bostrom, David Geffen School of Medicine at UCLA

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GENETIC OVERVIEW

Genetic Background

Generation

Mgp^{tm1Kry}

Alele Type

Gene Symbol

Gene Name

Targeted (Null/Knockout)

Mgp

matrix Gla protein

VIEW GENETICS

RESEARCH APPLICATIONS

Internal/Organ Research

Developmental Biology Research

Cardiovascular 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

A neo cassette replaces the promoter and exons 1-4 of the matrix Gla protein (*Mgp*) gene, abolishing gene expression. Homozygotes are viable but die within two months of age due to aortic rupture. Normally, MGP is present in bone, heart, kidney, lung, aorta and other vasculature, and can function as an arterial calcification inhibitor. These *Mgp^{tm1}* mice develop vascular calcification involving ectopic bone formation and osteochondrogenic differentiation in multipotent cells in the vascular media and endothelium. Lack of MGP in the endothelium triggers endothelial-mesenchymal transitions, which allow the endothelial cells to contribute cells to the vascular calcification. *Mgp^{tm1}* mice also exhibit abnormal calcification patterns in cartilage and the bone growth plate, which eventually leads to short stature and osteopenia. The lack of MGP also causes arteriovenous malformations (AVMs) in the lungs, kidneys and brain. The AVMs in the lungs and kidneys are associated with abnormal cell differentiation in the endothelium.

Development

Control Suggestions

Selected References

Genetics

Mgp^{tm1Kry}

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:[Mgp](#)

[Genotyping resources and troubleshooting](#)

Breeding Considerations

When maintaining a live colony, heterozygous mice may be bred to wildtype mice from the colony, or to C57BL/6J inbred mice (Stock No. [000664](#)). Homozygous mice survive to 2 months of age and then die due to rupture and subsequent hemorrhage of the thoracic and abdominal aorta.

[Additional Breeding and Husbandry Support](#)

Mating System

Wild-type x Heterozygote

Heterozygote x Wild-type

Citation

When using the B6.129S7-*Mgp*^{tm1Kry}/KbosJ mouse strain in a publication, please [cite the originating article\(s\)](#) and include JAX stock #023811 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 or wildtype for Mgp<tm1Kry>	\$2,854.50

RELATED PRODUCTS AND SERVICES		
Frozen Mouse Embryo	B6.129S7-Mgp<tm1Kry>/KbosJ	\$2595.00

PAYMENT TERMS AND CONDITIONS

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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.

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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

LICENSING INFORMATION

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 Email: TechTran@jax.org

Related Strains

All

By Allele

By Gene

By Collection



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