

STOCK *Fgf3*<sup>tm1Lwd</sup> *Fgf4*<sup>tm1.1Lwd</sup> /J

Stock No: 028716

 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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a strain expressing Cre recombinase, the resulting offspring will have exons 2 and 3 of *Fgf4* deleted in the *cre*-expressing tissues. These mice are suitable for useful for generating conditional mutations in applications related to the functional redundancy of *Fgf3* and *Fgf4* during embryogenesis, development and disease.

### Donating Investigator

Mark Lewandoski, National Cancer Institute

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## GENETIC OVERVIEW

### Genetic Background

### Generation

*Fgf4*<sup>tm1.1Lwd</sup>

#### Alele Type

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

#### Gene Symbol

*Fgf4*

#### Gene Name

fibroblast growth factor 4

*Fgf3*<sup>tm1Lwd</sup>

#### Alele Type

Targeted (Null/Knockout)

#### Gene Symbol

*Fgf3*

#### Gene Name

fibroblast growth factor 3

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 targeted *Fgf3* gene encodes an oncogenic fibroblast growth factor involved in inner ear development. Mutations in the *Fgf3* gene have been associated with Deafness, Congenital With Inner Ear Agenesis, Microtia, And Microdontia and Deafness With Labyrinthine Aplasia Microtia And Microdontia. The targeted *Fgf4* gene encodes an oncogenic fibroblast growth factor involved in limb development. Both *Fgf3* and *Fgf4* are important for embryonic axis extension. Mutations in the *Fgf4* gene have been associated with Kaposi sarcoma. Amplification and elevated levels of FGF3 and FGF4 is found in several types of cancer.

These mice carry a knock-out allele of the *Fgf3* gene and a floxed allele of the *Fgf4* gene, in *cis* (both genes are on Chromosome 7).

$Fgf3^{\Delta}$ - $Fgf4^{flox}$  mice, homozygous for both alleles, are viable, fertile and exhibit shortened tail length compared to double heterozygotes and wildtype littermates. Circling or head-tilt behavior is incompletely penetrant in  $Fgf3^{\Delta}$ - $Fgf4^{flox}$  homozygotes.

When crossed to a strain with Cre recombinase expression in the mesodermal lineages, or germline Cre recombinase expression, this mutant mouse strain may be useful in studies of fibroblast growth factors during development.

#### Development

#### Control Suggestions

#### Selected References

## Genetics

[+](#) *Fgf4*<sup>tm1.1Lwd</sup>

[+](#) *Fgf3*<sup>tm1Lwd</sup>

## 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:[Fgf4](#)

Separated PCR:[Fgf3 Alternate1](#)

[Genotyping resources and troubleshooting](#)

### Breeding Considerations

When maintaining a live colony, these mice can be bred as double homozygotes.

[Additional Breeding and Husbandry Support](#)

#### Mating System

Heterozygote x Wild-type

Wild-type x Heterozygote

#### Citation

When using the STOCK *Fgf3*<sup>tm1Lwd</sup> *Fgf4*<sup>tm1.1Lwd</sup>/J mouse strain in a publication, please [cite the originating article\(s\)](#) and include JAX stock #028716 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
<a href="#">Cryo Recovery</a>	Heterozygous or wildtype for both <a href="#">Fgf3&lt;tm1Lwd&gt;</a> and <a href="#">Fgf4&lt;tm1.1Lwd&gt;</a>	\$2,854.50

#### RELATED PRODUCTS AND SERVICES

<a href="#">Frozen Mouse Embryo</a>	STOCK <a href="#">Fgf3&lt;tm1Lwd&gt;</a> <a href="#">Fgf4&lt;tm1.1Lwd&gt;/J</a>	\$2595.00
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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

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## LICENSING INFORMATION

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

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