

129-Tgfb1 *tm1(Tgfb3)Kul* /J

Stock No: **024931**

 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

Ashok B Kulkarni, NIDCR NIH

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GENETIC OVERVIEW

Genetic Background

Generation

Tgfb1^{tm1(Tgfb3)Kul}

Alele Type

Gene Symbol

Gene Name

Targeted

Tgfb1

transforming growth factor, beta 1

VIEW GENETICS

RESEARCH APPLICATIONS

Internal/Organ Research

Diabetes and Obesity Research

Endocrine Deficiency 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

TGF-β1^{L-β3/L-β3} mice contain an HA-tagged transforming growth factor, beta 3 (*Tgfb3*) cDNA, and a *fl*-flanked neo cassette, expressed under control of the transforming growth factor, beta 1 (*Tgfb1*) promoter/enhancer sequences. TGFB isoforms are important cytokines that influence cell growth, cell differentiation, apoptosis, and cellular homeostasis. Each isoform contains a latency associated peptide (LAP) domain, required for localization and activation, and a receptor binding ligand, required for cell signaling. Each LAP sequences only shares 40% sequence homology between isoforms, while the ligands share 80% homology and all contain nine conserved cysteines. All three TGF-β proteins have distinct cell-specific expression patterns that reflect the differences in the promoters located within each homologue's gene. In these *TGF-β1^{L-β3/L-β3}* mice, the TGF-β1 LAP is maintained for localization and activation but cell signaling occurs through the TGF-β3 ligand. These mice do not exhibit the embryonic lethality, vasculogenesis defects, or autoimmunity associated with TGF-β1 deficiency. These *TGF-β1^{L-β3/L-β3}* mice have a shortened lifespan and display tooth and bone mineralization defects. These mice display an improved metabolic phenotype with reduced body weight gain and enhanced glucose tolerance, by induction of beneficial changes to the white adipose tissue compartment. These mice also exhibit no defects in palate development. Homozygotes are viable and fertile, with a median survival of 30.5 weeks.

Development

Expression Data

Control Suggestions

Selected References

Genetics

Tgfb1^{tm1(Tgfb3)Kul}

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: [Tgfb1-Alternate 3](#)

Separated PCR: [Tgfb1-Alternate 2](#)

[Genotyping resources and troubleshooting](#)

Breeding Considerations

When maintaining a live colony, homozygous mice may be bred. Homozygotes are viable and fertile, with a median survival of 30.5 weeks.

[Additional Breeding and Husbandry Support](#)

Citation

When using the 129-*Tgfb1*^{tm1(Tgfb3)*Kul*}/J mouse strain in a publication, please [cite the originating article\(s\)](#) and include JAX stock #024931 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](#)



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CRYORECOVERY - DOMESTIC PRICING

SERVICE/PRODUCT	DESCRIPTION	PRICE
Cryo Recovery	Heterozygous or wildtype for Tgfb1<tm1(Tgfb3)Kul>	\$2,854.50

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