

**B6.129(Cg)-Axin2<sup>tm1(cre/ERT2)Rnu</sup> /J**

Stock No: **018867** | Axin2-CreERT2

 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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pathway signaling. Crosses with floxed reporter strains enable conditional stem cell-specific labeling.

Donating Investigator

Roel Nusse, Stanford University

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## GENETIC OVERVIEW

Genetic Background      Generation

*Axin2<sup>tm1(cre/ERT2)Rnu</sup>*

Alele Type	Gene Symbol	Gene Name
Targeted (Recombinase-expressing, Inducible)	<i>Axin2</i>	axin 2

VIEW GENETICS

## RESEARCH APPLICATIONS

Developmental Biology Research  
Research Tools  
Cell 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

The *Axin2* (*axin2*) gene plays an integral role in the *Wnt* / $\beta$ -catenin signaling pathway that is involved in stem cell maintenance. As such, it is a frequently-used marker of functional stem cells and a target for analyzing the pathway in a variety of tissues.

In this inducible knock-in/knockout strain, Cre-ERT2 protein expression is driven by the endogenous *Axin2* promoter and enhancer sequences, affecting cells with active *Wnt*/ $\beta$ -catenin signaling. Expression of the targeted *Axin2* is ablated and Cre activity is only detected upon treatment with tamoxifen, thereby offering both spatial and temporal control. Heterozygous mice have no phenotype and show normal fertility.

Upon crossing these mice to Cre-reporter strains (e.g. floxed lacZ or GFP), *Wnt*/ $\beta$ -catenin responsive cells may be labeled for lineage tracing. Animals derived from crosses with B6.129(Cg)-Gt(ROSA)26Sor/J (see Stock No. [007676](#)) or B6.129S4-Gt(ROSA)26Sor<sup>tm1Sor</sup>/J (see Stock No. [003474](#)) can be treated with tamoxifen to label stem cells of the intestinal crypt and the mammary epithelium.

Homozygous *Axin2*-CreERT2 mice in The Jackson Laboratory colony are born at a significantly reduced frequency (~5% in heterozygous crosses). Due to the disruption of the targeted gene, animals may display minor phenotypes similar to Stock No. [009120](#), an *Axin*-lacZ mutant targeted to the same genetic location. Homozygotes may display malformations of skull structures, a phenotype resembling craniosynostosis in humans.

The donating investigator reports (8/2017) the observation that some heterozygous mice may exhibit a mild craniosynostosis phenotype and be born at sub-Mendelian ratios.

#### Development

#### Expression Data

#### Control Suggestions

#### Selected References

### Genetics

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## – Disease/Phenotype

+ Disease Terms

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+ 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:[Axin2-Alternate 1](#)

[Genotyping resources and troubleshooting](#)

[Nusse Lab PCR Protocol](#)

#### Breeding Considerations

Heterozygous mice have no phenotype and show normal fertility. Homozygous *Axin2*-CreERT2 mice are born at a significantly reduced frequency (~5% in heterozygous crosses). Due to the disruption of the targeted gene, animals may display minor phenotypes similar to Stock No. [009120](#), an *Axin*-lacZ mutant targeted to the same genetic location. Homozygotes may display malformations of skull structures, a phenotype resembling craniosynostosis in humans.

#### [Additional Breeding and Husbandry Support](#)

##### Mating System

Wild-type x Heterozygote

Heterozygote x Wild-type

##### Citation

When using the *Axin2*-CreERT2 mouse strain in a publication, please [cite the originating article\(s\)](#) and include JAX stock #018867 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



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 Axin2 <sup>tm1</sup> (cre/ERT2)Rnu>	\$2,854.50

#### RELATED PRODUCTS AND SERVICES

<a href="#">Frozen Mouse Embryo</a>	B6.129(Cg)-Axin2 <sup>tm1</sup> (cre/ERT2)Rnu>/J	\$2595.00
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## ➔ Terms Of Use

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