These Smad2 mice possess loxP sites flanking exon 2 of the SMAD family member 2 gene. These mice may be useful for studying the cellular and mechanical role of TGF-β in regulating development.

Donating Investigator
Erwin P. Bottinger, The Mount Sinai Hospital

Typically mice are recovered in 10-14 weeks. Contact Customer Service to place an order or for more information.

**GENETIC OVERVIEW**

<table>
<thead>
<tr>
<th>Genetic Background</th>
<th>Generation</th>
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<tbody>
<tr>
<td>Smad2&lt;sup&gt;tm1.1Epb&lt;/sup&gt;</td>
<td></td>
</tr>
</tbody>
</table>

- **Allele Type**: Targeted (Conditional ready (e.g. floxed), No functional change)
- **Gene Symbol**: Smad2
- **Gene Name**: SMAD family member 2

**RESEARCH APPLICATIONS**

Cell Biology Research
Research Tools
Details

Detailed Description
These Smad2<sup>fl</sup> mice possess <i>loxP</i> sites flanking exon 2 of the SMAD family member 2 (<i>Smad2</i>) gene. SMAD2 is an intracellular signaling mediator involved in growth control and transcriptional regulation during development by transmitting chemical signals from the cell surface to the nucleus via the transforming growth factor β (TGFβ) signaling system. Mice that are homozygous for this allele are viable and fertile. When these mutant mice are bred to mice that express Cre recombinase, resulting offspring will have exon 2 deleted in cre-expressing tissues.

For example, when crossed to B6.Cg-Tg(Cdh16-cre)91Igr/J mice (Stock No. 012237) expressing Cre recombinase in the kidney, TGF-β signaling is enhanced which promotes increased fibrosis.

When crossed to B6.Cg-Tg(Alb-cre)21Mgn/J mice (Stock No. 003574) expressing Cre recombinase in the liver, hepatocytes exhibit altered growth and dedifferentiation independent of TGF-beta signaling.

Development

Control Suggestions

Selected References

Genetics

<i>Smad2<sup>tm1.1Ep</sup></i>

Disease/Phenotype

Disease Terms

Research Areas By Phenotype
Technical Support

Genotyping Protocols
Standard PCR: Smad2Alternate 1
Genotyping resources and troubleshooting

Breeding Considerations
When maintaining a live colony mice homozygous for the floxed allele may be bred together.

Additional Breeding and Husbandry Support
Mating System
Homozygote x Homozygote

Citation
When using the Smad2<sup>f</sup> mouse strain in a publication, please cite the originating article(s) and include JAX stock #022074 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](image)

Typically mice are recovered in 10-14 weeks. Contact Customer Service to place an order or for more information.

<table>
<thead>
<tr>
<th>SERVICE/PRODUCT</th>
<th>DESCRIPTION</th>
<th>PRICE</th>
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</thead>
<tbody>
<tr>
<td>Cryo Recovery</td>
<td>Heterozygous or Wildtype for Smad2&lt;tm1.1Epb&gt;</td>
<td>$2,854.50</td>
</tr>
</tbody>
</table>
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