

**STOCK *Ptf1a*<sup>tm1(cre)Hnak</sup>/RschJ**Stock No: **023329** | p48-cre Targeted Mutation

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The p48-cre knock-in/knock-out allele has a Cre recombinase gene inserted into the first coding exon of the *Ptf1a* gene; both abolishing endogenous *Ptf1a* gene function and placing *cre* expression under the control of the endogenous *Ptf1a* promoter/enhancer elements. Cre recombinase activity occurs in the developing pancreas, neural tube, cerebellum and retina. These mice may be useful for cre-lox studies of pancreatic development.

**Donating Investigator**

Roland M. Schmid, Technical University of Munich

Henrik Einwaechter, Technical University of Munich

[READ MORE +](#)**GENETIC OVERVIEW****Genetic Background****Generation***Ptf1a*<sup>tm1(cre)Hnak</sup>**Allele Type**

Targeted (Recombinase-expressing)

**Gene Symbol***Ptf1a***Gene Name**

pancreas specific transcription factor, 1a

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## 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 *Ptf1a* gene encodes a transcription factor involved in pancreatic organogenesis. This p48-cre strain expresses Cre recombinase from the endogenous *Ptf1a* locus and results in a null allele. Cre recombinase sequence was inserted at the start codon of the gene. When crossed with a strain containing *loxP* site flanked sequence of interest, Cre-mediated recombination results in tissue-specific deletion of the target. Recombination occurs in embryonic mice, at E10.5, in the pancreas (specifically the prepancreatic endoderm and progenitor and exocrine cells), neural tube, cerebellum and retina. Germline expression is also described below. Mice that are heterozygous for the targeted mutation are viable and fertile. Homozygotes are not viable, dying within 3 hours of birth.

[Kabacaoglu et al. 2020 bioRxiv](#) reports that p48-cre mice express Cre in male germline. The recombination event was observed in multiple floxed alleles, while the frequency varied depending on the target gene. Additionally, Cre allele transmission into progeny was not necessary for the germline recombination. As such, for Cre-lox experiments and to avoid/minimize germline deletion of the floxed allele, researchers may consider breeding p48-cre females with floxed males. If the recombinase activity pattern of this allele is further characterized by the Genetic Resource Science group at The Jackson Laboratory, such findings will be reported on the Mouse Genome Informatics (MGI) Allele Detail entry ([Ptf1a<sup>tm1\(cre\)Hnak</sup>](#)). This same information may also be found searching the [MGI Recombinase Activity](#) and [MGI Gene Expression + Recombinase Activity Comparison Matrix](#).

#### Development

#### Expression Data

#### Control Suggestions

#### Selected References

### Genetics

#### [Ptf1a<sup>tm1\(cre\)Hnak</sup>](#)

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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

Probe: [Generic Cre Probe](#)

Standard PCR: [Ptf1a Alt 1](#)

[Genotyping resources and troubleshooting](#)

### Breeding Considerations

When maintaining a live colony, heterozygous mice may be bred together, to wildtype siblings, or to C57BL/6J inbred mice (Stock No. [000664](#)). Homozygotes are not viable, dying within 3 hours of birth.

[Kabacaoglu et al. 2020 bioRxiv](#) reports that p48-cre mice express Cre in male germline. The recombination event was observed in multiple floxed alleles, while the frequency varied depending on the target gene. Additionally, Cre allele transmission into progeny was not necessary for the germline recombination. As such, for Cre-lox experiments and to avoid/minimize germline deletion of the floxed allele, researchers may consider breeding p48-cre females with floxed males.

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

#### Mating System

Wild-type x Heterozygote

Heterozygote x Wild-type

#### Citation

When using the p48-cre mouse strain in a publication, please [cite the originating article\(s\)](#) and include JAX stock #023329 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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Recovery

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### 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 Ptf1a<tm1(cre)Hnak>	\$2,854.50

#### RELATED PRODUCTS AND SERVICES

<a href="#">Frozen Mouse Embryo</a>	STOCK Ptf1a<tm1(cre)Hnak>/RschJ	\$2595.00
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