

STOCK *Ptf1a*<sup>tm2(cre/ESR1)Cvw</sup> / J  
Stock No: **019378** | *Ptf1a*<sup>Cre-ERTM</sup>

Targeted Mutation

Live mice available in varying quantities. Ask Customer Service for details.

PLACE ORDER

[Email](#) [Download PDF](#) [Help](#)

function and express CreERTM fusion protein from the *Ptf1a* promoter/enhancer elements. PTF1A effects growth and lineage specification of pancreatic multipotent progenitor cells during development.

### Donating Investigator

Dr. Chris Wright, Vanderbilt University School of Medicine

READ MORE +

## GENETIC OVERVIEW

### Genetic Background

### Generation

?+pN5  
(2021-04-06 00:00:00)

*Ptf1a*<sup>tm2(cre/ESR1)Cvw</sup>

### Alele Type

Targeted (Recombinase-expressing, Inducible)

### Gene Symbol

*Ptf1a*

### Gene Name

pancreas specific transcription factor, 1a

VIEW GENETICS

## RESEARCH APPLICATIONS

### Research Tools

VIEW ALL RESEARCH APPLICATIONS

## BASE PRICE

Starting at:

\$278.00 Domestic price for female 4-week

356.51 Domestic price for breeder pair

V I E W P R I C E L I S T

## Details

### Detailed Description

The *Ptf1a*<sup>Cre-ERTM</sup> knock-in allele was designed to both abolish the pancreas specific transcription factor, 1a (*Ptf1a*) gene function and express CreERTM fusion protein from the *Ptf1a* promoter/enhancer elements. PTF1A effects growth and lineage specification of pancreatic multipotent progenitor cells (MPCs) during development. PTF1A is expressed in the pancreas beginning at E9.5. Heterozygous mice are viable and fertile while homozygotes die at birth. Cre-ERTM fusion gene activity is inducible and can be observed following tamoxifen administration. When these mice are bred with mice containing *loxP*-flanked sequences, tamoxifen-inducible Cre-mediated recombination will result in deletion of the floxed sequences in pancreatic acinar cells of the offspring.

In 2016, the donating investigator's laboratory reported a different (not tamoxifen-dependent) *Ptf1a*-cre line exhibited some paternal germline Cre recombination (~20-40%). While they did not know if this *Ptf1a*<sup>Cre-ERTM</sup> allele exhibited any germline Cre recombination before tamoxifen, to be cautious, they suggest that the *Ptf1a*<sup>Cre-ERTM</sup> allele be passed on maternally to avoid/minimize the possibility of germline deletion of floxed allele(s).

If the recombinase activity pattern of this *Ptf1a*<sup>Cre-ERTM</sup> allele is characterized by The Jackson Laboratory, such findings will be reported on the [Mouse Genome Informatics \(MGI\) Allele Detail entry](#). This same information may also be found searching the [MGI Recombinase Activity](#) and [MGI Gene Expression + Recombinase Activity Comparison Matrix](#).

*The Cre-ERTM fusion protein consists of Cre recombinase fused to a G525R mutant form of the mouse estrogen receptor ligand binding domain which fails to bind the naturally occurring ligand 17 $\beta$ -estradiol at normal concentrations but retains relatively high affinity for the synthetic ligand 4-hydroxytamoxifen (4-OHT). Restricted to the cytoplasm, Cre-ERTM can only gain access to the nuclear compartment after exposure to tamoxifen. To counteract the mixed estrogen agonist effects of tamoxifen injections, which can result in late fetal abortions in pregnant mice, progesterone may be coadministered.*

### Development

### Expression Data

### Control Suggestions

### Selected References

## Genetics

[+ \*Ptf1a\*<sup>tm2\(cre/ESR1\)Cww</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

Probe:[Generic Cre Probe](#)

Standard PCR:[Ptf1aalternate2](#)

Standard PCR:[Generic Cre Melt Curve Analysis](#)

[Genotyping resources and troubleshooting](#)

### Dietary Information

LabDiet® 5K52 formulation (6% fat)

### Breeding Considerations

Homozygous mice die at birth. When maintaining a live colony, heterozygous mice may be bred to wildtype mice from the colony.

Of note, the donating investigator suggests that this *Ptf1a*<sup>Cre-ERTM</sup> allele should be passed on maternally to avoid/minimize the possibility of deletion of floxed allele(s) when passed through the male germline. See Detailed Description for more information.

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

#### Mating System

Wild-type x Heterozygote

Heterozygote x Wild-type

## Citation

When using the Ptf1a<sup>Cre-ERTM</sup> mouse strain in a publication, please [cite the originating article\(s\)](#) and include JAX stock #019378 in your Materials and Methods section.

## Animal Health Reports

[Facility Barrier Level Descriptions](#)

 [AX18 \(Maximum\)](#)

## ➔ Pricing & Availability



Live mice available in varying quantities. Ask Customer Service for details.

Available

## Domestic **International**

Pricing effective for USA, Canada and Mexico shipping destinations

| LIVE MOUSE |        |  |          |
|------------|--------|--|----------|
| AGE        | SEX    | GENOTYPE   | PRICE    |
| 4 weeks    | Female | Heterozygous for Ptf1a <sup>tm2(cre/ESR1)O/w</sup> | \$278.00 |
|            | Male   | Heterozygous for Ptf1a <sup>tm2(cre/ESR1)O/w</sup> | \$278.00 |
| 4 weeks    | Female | Wild-type for Ptf1a <sup>tm2(cre/ESR1)O/w</sup>    | \$78.51  |
|            | Male   | Wild-type for Ptf1a <sup>tm2(cre/ESR1)O/w</sup>    | \$78.51  |
| 5 weeks    | Female | Heterozygous for Ptf1a <sup>tm2(cre/ESR1)O/w</sup> | \$278.00 |
|            | Male   | Heterozygous for Ptf1a <sup>tm2(cre/ESR1)O/w</sup> | \$278.00 |
| 5 weeks    | Female | Wild-type for Ptf1a <sup>tm2(cre/ESR1)O/w</sup>    | \$78.51  |
|            | Male   | Wild-type for Ptf1a <sup>tm2(cre/ESR1)O/w</sup>    | \$78.51  |
| 6 weeks    | Female | Heterozygous for Ptf1a <sup>tm2(cre/ESR1)O/w</sup> | \$278.00 |
|            | Male   | Heterozygous for Ptf1a <sup>tm2(cre/ESR1)O/w</sup> | \$278.00 |
| 6 weeks    | Female | Wild-type for Ptf1a <sup>tm2(cre/ESR1)O/w</sup>    | \$78.51  |
|            | Male   | Wild-type for Ptf1a <sup>tm2(cre/ESR1)O/w</sup>    | \$78.51  |
| 7 weeks    | Female | Heterozygous for Ptf1a <sup>tm2(cre/ESR1)O/w</sup> | \$278.00 |
|            | Male   | Heterozygous for Ptf1a <sup>tm2(cre/ESR1)O/w</sup> | \$278.00 |
| 7 weeks    | Female | Wild-type for Ptf1a <sup>tm2(cre/ESR1)O/w</sup>    | \$78.51  |
|            | Male   | Wild-type for Ptf1a <sup>tm2(cre/ESR1)O/w</sup>    | \$78.51  |
| 8 weeks    | Female | Heterozygous for Ptf1a <sup>tm2(cre/ESR1)O/w</sup> | \$278.00 |
|            | Male   | Heterozygous for Ptf1a <sup>tm2(cre/ESR1)O/w</sup> | \$278.00 |
| 8 weeks    | Female | Wild-type for Ptf1a <sup>tm2(cre/ESR1)O/w</sup>    | \$78.51  |

|          | SEX    | Wild-type for Ptf1a <sup>tm2(cre/ESR1)Ow</sup>    | \$78.51  |
|----------|--------|---|----------|
| 9 weeks  | Female | Heterozygous for Ptf1a <sup>tm2(cre/ESR1)Ow</sup> | \$278.00 |
|          | Male   | Heterozygous for Ptf1a <sup>tm2(cre/ESR1)Ow</sup> | \$278.00 |
| 9 weeks  | Female | Wild-type for Ptf1a <sup>tm2(cre/ESR1)Ow</sup>    | \$78.51  |
|          | Male   | Wild-type for Ptf1a <sup>tm2(cre/ESR1)Ow</sup>    | \$78.51  |
| 10 weeks | Female | Heterozygous for Ptf1a <sup>tm2(cre/ESR1)Ow</sup> | \$278.00 |
|          | Male   | Heterozygous for Ptf1a <sup>tm2(cre/ESR1)Ow</sup> | \$278.00 |
| 10 weeks | Female | Wild-type for Ptf1a <sup>tm2(cre/ESR1)Ow</sup>    | \$78.51  |
|          | Male   | Wild-type for Ptf1a <sup>tm2(cre/ESR1)Ow</sup>    | \$78.51  |
| 11 weeks | Female | Heterozygous for Ptf1a <sup>tm2(cre/ESR1)Ow</sup> | \$278.00 |
|          | Male   | Heterozygous for Ptf1a <sup>tm2(cre/ESR1)Ow</sup> | \$278.00 |
| 11 weeks | Female | Wild-type for Ptf1a <sup>tm2(cre/ESR1)Ow</sup>    | \$78.51  |
|          | Male   | Wild-type for Ptf1a <sup>tm2(cre/ESR1)Ow</sup>    | \$78.51  |
| 12 weeks | Female | Heterozygous for Ptf1a <sup>tm2(cre/ESR1)Ow</sup> | \$278.00 |
|          | Male   | Heterozygous for Ptf1a <sup>tm2(cre/ESR1)Ow</sup> | \$278.00 |
| 12 weeks | Female | Wild-type for Ptf1a <sup>tm2(cre/ESR1)Ow</sup>    | \$78.51  |
|          | Male   | Wild-type for Ptf1a <sup>tm2(cre/ESR1)Ow</sup>    | \$78.51  |

| BREEDER PAIR |   |          |
|--------------|---|----------|
| SEX          | GENOTYPE  | PRICE    |
| Female       | Heterozygous for Ptf1a <sup>tm2(cre/ESR1)Ow</sup> | \$356.51 |
| Male         | Wild-type for Ptf1a <sup>tm2(cre/ESR1)Ow</sup>    |          |
| Female       | Wild-type for Ptf1a <sup>tm2(cre/ESR1)Ow</sup>    | \$356.51 |
| Male         | Heterozygous for Ptf1a <sup>tm2(cre/ESR1)Ow</sup> |          |

| RELATED PRODUCTS AND SERVICES       |                                |           |
|-------------------------------------|--------------------------------|-----------|
| <a href="#">Frozen Mouse Embryo</a> | STOCK Ptf1a<tm2(cre/ESR1)Cw>/J | \$2595.00 |

## PAYMENT TERMS AND CONDITIONS

Terms are granted by individual review and stated on the customer invoice(s) and account statement. These transactions are payable in U.S. currency within the granted terms. Payment for services, products, shipping containers, and shipping costs that are rendered are expected within the payment terms indicated on the invoice or stated by contract. Invoices and account balances in arrears of stated terms may result in The Jackson Laboratory pursuing collection activities including but not limited to outside agencies and court filings.

## THE JACKSON LABORATORY'S GENOTYPE PROMISE

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

### TERMS OF USE

[General Terms and Conditions](#)

Q U E S T I O N S   A B O U T   T E R M S   O F   U S E

### ADDITIONAL USE RESTRICTIONS APPLY

[Use of MICE by companies or for-profit entities requires a license prior to shipping.](#)

### LICENSING INFORMATION

Phone: 207-288-6470

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

---

## Related Strains

All

By Allele

By Gene

By Collection






## DO YOU NEED BALB/c MICE?

Rely on JAX to provide the models you need, when you need them.

[LEARN MORE](#)



 CONTACT

 DONATE

 SUBSCRIBE

[JAX HOME](#) [CAREERS](#) [LEGAL INFORMATION](#)

[RESEARCH CENTERS](#) [MOUSE GENOME INFORMATICS](#)


[MOUSE PHENOME DATABASE](#)

*Leading the search for*

# TOMORROW'S CURES



©2021 THE JACKSON LABORATORY

Choose other country or region 

 [E](#) [F](#) [E](#) [D](#) [B](#)

Did you find what you were looking for?

Yes  No