

FVB/N-Tg(Ins1-luc)VUPwrs/J

Stock No: **007800**

 Coisogenic, Transgenic

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

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invasive, *in vivo* monitoring of bioluminescent β cells for studying glucose homeostasis, β cell growth and regeneration, and diabetes.

Donating Investigator

Alvin C Powers, Vanderbilt University

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GENETIC OVERVIEW

Genetic Background

Generation

Tg(Ins1-luc)VUPwrs

Alele Type

Transgenic (Reporter)

VIEW GENETICS

RESEARCH APPLICATIONS

Research Tools

Diabetes and Obesity 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

Mice hemizygous for this MIP-luc transgene are viable and fertile, with luciferase (*luc*) expression under control of the mouse insulin I promoter (MIP or *Ins1*). After injection of the luciferin substrate, *luc* expression can be visualized using bioluminescence imaging (BLI). Mice from founder line VU (MIP-Luc-VU) exhibit strong and consistent *luc* bioluminescence emanating exclusively from β cells of the pancreatic islet, and *luc*-expressing beta cells can be visualized through the skin. MIP-Luc-VU pancreatic islets have normal islet architecture and insulin secretion both *in vivo* and *in vitro*, with luciferase intensity reporting the number of islets. In transplantation settings and models of increased/decreased beta cell mass, bioluminescence is proportional to beta cell mass (incorporating some aspects of islet function, with signal up-regulation in hyperglycemic states). These MIP-Luc-VU mice may be useful as a source of luciferase-expressing β cells for pancreatic islet cultures and transplantation, as well as non-invasive, *in vivo* monitoring of bioluminescent β cells for studying glucose homeostasis, β cell growth and regeneration, and diabetes.

Development

Expression Data

Control Suggestions

Selected References

Genetics

Tg(*Ins1-luc*)VUPwrs

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:[Generic Luc](#)

Standard PCR:[Generic Luc](#)

QPCR:[Generic Luc qPCR](#)

[Genotyping resources and troubleshooting](#)

Breeding Considerations

When maintaining a live colony, hemizygous mice are bred with wildtype siblings or with FVB/NJ (Stock No. [001800](#)).

[Additional Breeding and Husbandry Support](#)

Citation

When using the FVB/N-Tg(Ins1-luc)VUPwrs/J mouse strain in a publication, please [cite the originating article\(s\)](#) and include JAX stock #007800 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

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
Cryo Recovery	Hemizygous or Non carrier for Tg(Ins1-luc)VUPwrs	\$2,854.50

RELATED PRODUCTS AND SERVICES

Frozen Mouse Embryo	FVB/N-Tg(Ins1-luc)VUPwrs/J Embryos	\$2595.00
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PAYMENT TERMS AND CONDITIONS

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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.

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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

Related Strains

All

By Allele

By Gene

By Collection



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