

STOCK *Ptprc*^a *Lag3*^{tm1Doi} Tg(CAG-luc,-GFP)L2G85Chco
Thy1^a/J

Stock No: 025855

Targeted Mutation, Transgenic, Variant Allele

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

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directed by the CAG promoter, making them useful in studies of transplantation, noninvasive image mapping, *in vivo* bioluminescence imaging and technology development. LAG3 deficiency in these mice enhances the effect of GVHD.

Donating Investigator

Robert Negrin, Stanford University School of Medicine

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GENETIC OVERVIEW

Genetic Background

Generation

Lag3^{tm1Doi}

Alele Type

Targeted (Null/Knockout)

Gene Symbol

Lag3

Gene Name

lymphocyte-activation gene 3

Thy1^a

Alele Type

Not Applicable

Gene Symbol

Thy1

Gene Name

thymus cell antigen 1, theta

Tg(CAG-luc,-GFP)L2G85Chco

Alele Type

Transgenic (Reporter)

Ptprc^a

Alele Type

Not Applicable

Gene Symbol

Ptprc

Gene Name

protein tyrosine phosphatase, receptor type, C

V I E W G E N E T I C S

RESEARCH APPLICATIONS

Immunology, Inflammation and Autoimmunity Research
Research Tools

V I E W A L L R E S E A R C H A P P L I C A T I O N S

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 homozygous for the CAG-luc-eGFP L2G85 transgene are viable and fertile, with expression of firefly luciferase and enhanced green fluorescence protein directed by the CAG promoter (human cytomegalovirus immediate early promoter enhancer with chicken beta-actin/rabbit beta-globin hybrid promoter). Exons 1-3 of lymphocyte-activation gene 3 (*Lag3*) have been replaced with a neomycin resistance gene in reverse orientation to the gene. These mice also harbor congenic *Ptprc*^a (Cd45.1) and *Thy1*^a (Thy1.1) cell surface markers allowing for the tracking of these donor cells in vitro. *Lag3* gene product is a transmembrane protein expressed in stimulated T lymphocytes and activated natural killer cells. LAG-3 has been found to negatively regulate cellular proliferation, activation, and homeostasis of T cells, and plays a role in Treg suppressive function.

Bioluminescence is detected in heart, spleen, muscle, pancreas, skin, thymus and bone marrow. Luciferase activity is not detected in mature erythrocytes, although low levels are detected in erythrocyte precursors and varying levels of activity in all leukocyte subsets tested. Following luciferin injection, luciferase expression is generally greater in males than females, and the emitted light is adequate to penetrate the tissues of the mice so it can be detected externally with low-light imaging cameras. When mice receive a *Lag3* ^{-/-} conventional T cell transfer, imaging shows that there is a significant increase in the activation and proliferation compared to transfer of WT conventional T cells. *Lag3* deficiency on CD4, but not CD8 T cells, enhances the effect of GVHD. GFP fluorescence is detected in skin (upper epidermal layers) by fluorescence microscopy. The Donating Investigator reports that for the FVB-Tg(CAG-luc,-GFP)L2G85Chco/J (Stock No. 008450) strain, no GFP fluorescence is detected in hematopoietic tissues by flow cytometric analysis.

In an attempt to offer alleles on well-characterized or multiple genetic backgrounds, alleles are frequently moved to a genetic background different from that on which an allele was first characterized. It should be noted that the phenotype could vary from that originally described. We will modify the strain description if necessary as published results become available.

[+ Development](#)

[+ Expression Data](#)

[+ Control Suggestions](#)

[+ Selected References](#)

[- Genetics](#)

[+ *Lag3^{tm1Doi}*](#)

[+ *Thy1^a*](#)

[+ Tg\(CAG-luc,-GFP\)L2G85Chco](#)

[+ *Ptprc^a*](#)

[- 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:[Ptprc End Point-Alternate 1](#)

QPCR:[Fluorescent Proteins -- Generic GFP](#)

End Point Analysis:[Thy1 End Point](#)

Probe:[Fluorescent Proteins \(Generic GFP\)](#)

QPCR:[Firefly Luc-qPCR](#)

Standard PCR:[Firefly Luc](#)

Separated PCR:[Lag3 Alternate6](#)

[Genotyping resources and troubleshooting](#)

Breeding Considerations

When maintaining a live colony, these mice can be bred as homozygotes for all four alleles.

[Additional Breeding and Husbandry Support](#)

Citation

When using the STOCK *Ptprc^a Lag3^{tm1Doi} Tg(CAG-luc,-GFP)L2G85Chco Thy1^a /J* mouse strain in a publication, please [cite the originating article\(s\)](#) and include JAX stock #025855 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

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Domestic | International

Pricing effective for USA, Canada and Mexico shipping destinations

CRYORECOVERY - DOMESTIC PRICING

SERVICE/PRODUCT	DESCRIPTION	PRICE
Cryo Recovery	Homozygous for <i>Ptprc</i> , Homozygous for <i>Lag3^{tm1Doi}</i> , Homozygous for <i>Tg(CAG-luc,-GFP)L2G85Chco</i> , Homozygous for <i>Thy1^a</i> ,	\$2,854.50

RELATED PRODUCTS AND SERVICES

Frozen Mouse Embryo	STOCK <i>Ptprc</i> <i>Lag3^{tm1Doi} Tg(CAG-luc,-GFP)L</i> Frozen Embryos	\$2595.00
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