

B6;C-Tg(Erv4-tdTomato)449Slp/J

Stock No: **018936**

 **Transgenic**

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embryonic and extraembryonic tissues.

Donating Investigator

Samuel L Pfaff, The Salk Institute

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GENETIC OVERVIEW

Genetic Background

Generation

Tg(Erv4-tdTomato)449Slp

Alele Type

Transgenic (Reporter)

VIEW GENETICS

RESEARCH APPLICATIONS

Research Tools

Developmental Biology 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

A rare and transient subpopulation of mouse embryonic stem (ES) cells can express high levels of transcripts that are found in two-cell (2C) embryos. These cells lack the typical inner cell mass pluripotency markers *Oct4* (*Pou5f1*), *Sox2*, and *Nanog* but can contribute to the development of both embryonic and extraembryonic tissues.

The most highly activated sequence repeat in two-cell (2C) embryos is the MuERV-L (murine endogenous retrovirus with leucine tRNA primer) family of retroviruses and their corresponding long terminal repeat (LTR) promoters (Mt2_mm).

In order to label 2C-like ES cells, this transgenic strain places MuERV-L 5' LTR and a portion of the *Gag* gene upstream of the red fluorescent protein tandem dimeric Tomato (tdTomato).

When paternally inherited, the transgene is expressed *in vivo* during zygote genome activation at the 2C stage. Fluorescence is weak and can be enhanced using antibodies recognizing the tdTomato transgene.

In vitro, the transgene is expressed in a small population of mouse ES cultures derived from transgene positive blastocysts. tdTomato expression is highest in arrested zygotes and 2C embryos and becomes downregulated at the morula stage.

It was found that these labeled ES cells cycle in and out of the pluripotent 2C-like state. In order to indelibly mark these cells and follow their fate, a transgenic mouse line incorporating MuERV-L regulatory elements driving expression of a tamoxifen-inducible Cre recombinase was created (2C::ERT2-Cre-ERT2) (see Stock No. [018937](#)).

Development

Expression Data

Control Suggestions

Selected References

Genetics

[+ Tg\(Erv4-tdTomato\)449Slp](#)

[- 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 tdTomato](#)

Separated PCR:[Generic tdTomato](#)

Standard PCR:[Tg\(Erv4-tdTomato\)449Slp-Alternate 1](#)

Probe:[Krt8-Alterante 1](#)

[Genotyping resources and troubleshooting](#)

Breeding Considerations

Hemizygotes are viable, fertile, and have no overt phenotype. It is not yet known whether homozygotes are viable and fertile. When paternally inherited, the transgene is expressed *in vivo* during zygote genome activation at the embryonic two-cell (2C) stage.

[Additional Breeding and Husbandry Support](#)

Citation

When using the B6;C-Tg(Erv4-tdTomato)449Slp/J mouse strain in a publication, please [cite the originating article\(s\)](#) and include JAX stock #018936 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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CRYORECOVERY - DOMESTIC PRICING

SERVICE/PRODUCT	DESCRIPTION	PRICE
Cryo Recovery	Hemizygosu or Non carrier for Tg(Erv4-tdTomato)449Slp	\$2,854.50

RELATED PRODUCTS AND SERVICES

Frozen Mouse Embryo	B6;C-Tg(Erv4-tdTomato)449Slp/J Frozen Embryo	\$2595.00
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