The Jackson Laboratory

CBy.Cg-*Thy1*^{a} Tg(TcraCl4,TcrbCl4)1Shrm/ShrmJ

Stock No: **005307** | clone-4 TCR

Congenic, Transgenic

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

PLACE ORDER

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MHC class I molecule *H2-K*^{d}. The *Thy1.1* allele serves as a marker for following donor CD8^{+} T cells *in vitro*. Cell populations derived from these transgenic mice can be distinguished from syngeneic host and other mice with the alternate allele via flow cytometry.

Donating Investigator

Linda Sherman, The Scripps Research Institute

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GENETIC OVERVIEW

Genetic Background **Generation**

Thy1^{a}

Allele Type **Gene Symbol** **Gene Name**

Not Applicable *Thy1* thymus cell antigen 1, theta

Tg(TcraCl4,TcrbCl4)1Shrm

Allele Type

Transgenic (Inserted expressed sequence)

VIEW GENETICS

RESEARCH APPLICATIONS

Research Tools

Immunology, Inflammation and Autoimmunity Research

VIEW ALL RESEARCH APPLICATIO

BASE PRICE

Starting at:

$2,854.50 Domestic price Cryo Recovery

VIEW PRICE LIST

Details

Detailed Description

Transgenic mice are viable, fertile, normal in size, normoglycemic and do not display any gross physical or behavioral abnormalities.The TCR expressed from this transgene is specific for influenza virus A/PR/8 hemagglutinin (HA) in the context of the MHC class I molecule*H2-K*^{d}. Both thymic and peripheral T-cell populations are skewed toward CD8+ cells. The majority of thymocytes and virtually all CD8^{+} T cells in lymph nodes express the transgenic TCR beta chain. About 40% of peripheral blood CD8^{+} T cells react with the HA peptide presented by *H2-K*^{d}. When mated with Tg(Ins2-HA)165Bri, double transgenic neonates have similar levels of V-beta 8 and total number of thymocytes as Tg(TcraCl4,TcrbCl4) mice however the double transgenics become spontaneously diabetic after birth and die within 10 days.

This mouse is further modified with the Thy1.1 allele, rather than the alternate allele present in C57BL/10, DBA/2, and BALB/c mice. Thus, cell populations derived from these transgenic mice can be distinguished from syngeneic host and other mice with the alternate allele via flow cytometry. The presence of *Thy1*^{a} serves as a marker for following donor CD8^{+} T cells in vitro.

This transgenic model is useful in the study of T-cell activation, cross presentation of antigens, process of thymic selection, peripheral tolerance and the immune response to influenza.

Development

Expression Data

Control Suggestions

Selected References

Genetics

- *Thy1*^{a}
- Tg(TcraCl4,TcrbCl4)1Shrm

Disease/Phenotype

- Disease Terms
- Research Areas By Phenotype
- Mammalian Phenotype Terms by Genotype
- References

Technical Support

CONTACT TECHNICAL SUPPORT

Genotyping Protocols

End Point Analysis:Thy1End Point
End Point Analysis:Thy1End Point
QPCR:Tg(TcraCl4,TcrbCl4)-alternate 1
Probe:Tg(TcraCl4,TcrbCl4)1Shrm-Probe
Probe:Tg(TcraCl4,TcrbCl4)1Shrm-Probe
Genotyping resources and troubleshooting

Appearance

pink-eyed albino
Related Genotype: *A*/? *Tyr*^{c}/*Tyr*^{c}

Citation

When using the clone-4 TCR mouse strain in a publication, please cite the originating article(s) and include JAX stock #005307 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(TcraCl4,TcrbCl4)1Shrm, Compound Heterozygous for allele Thy1b and allele Thy1a/	$2,854.50

RELATED PRODUCTS AND SERVICES

Frozen Mouse Embryo	CBy.Cg-Thy1<a> Tg(TcraCl4 TcrbCl4)1Shrm/ShrmJ	$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

QUESTIONS ABOUT TERMS OF USE

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