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MMRRC Stock No: 43833-JAX | TS1(SW)

Congenic, Transgenic



CRYORECOVERY

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Overview

Also Known As: TS1(SW)

TS1(SW) mice express rearranged T cell receptor chains derived from a T cell hybridoma raised against hemagglutinin (HA) from a

mouse immunized with the SW influenza virus. This mouse strain may be useful for studies of immune regulation, B and T cell tolerance, autoimmunity, and arthritis.

Donating Investigator

Andrew Caton, Wistar Institute

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GENETIC OVERVIEW

Genetic Background

Generation

Tg(TcraS106-1,TcrbS106-1)TS1SWAjca

Allele Type

Transgenic (Inserted expressed sequence)

VIEW GENETICS

RESEARCH APPLICATIONS

Research Tools

Immunology, Inflammation and Autoimmunity Research

VIEW ALL RESEARCH APPLICATIONS

Details

Detailed Description

TS1(SW) mice express rearranged Va 8.3/Vβ 10 T cell receptor chains derived from a T cell hybridoma raised against hemagglutinin (HA) from a mouse immunized with the SW influenza virus. SW contains an analog of the S1 determinant, the major I-E^d-restricted influenza virus A/Puerto Rico/8/34 (PR8) HA T cell determinant recognized by BALB/c mice. S1(SW) differs from S1 by 2 amino acid residues, R to K at residue 113 and E to T at residue 120. CD4+ T cells from TS1(SW) mice exhibit a high affinity for S1(SW) peptide and a lower affinity for S1 peptide. When combined with Tg(H2-Ea-HA)HACIIAcja transgenic mice (MMRRC Stock 043832) expressing PR8 hemagglutinin (HA) neo-self antigen under the direction of the mouse MHC Class II Ea (H2-Ea) promoter, progeny develop spontaneous inflammatory arthritis with a female sex bias and a B cell requirement for disease development. Male mice exhibit decreased severity and a delay in disease onset as compared to female mice. This mouse strain may be useful for studies of immune regulation, B and T cell tolerance, autoimmunity, and arthritis.

Development

Expression Data

Control Suggestions

[+ Selected References](#)

[- Genetics](#)

[+ Tg\(TcraS106-1,TcrbS106-1\)TS1SWA_{jca}](#)

[- Disease/Phenotype](#)

[+ Disease Terms](#)

[+ Research Areas By Genotype](#)

[+ Mammalian Phenotype Terms by Genotype](#)

[+ References](#)

[- Technical Support](#)

C H A T O  F L I N E

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:[Tg\(TcraS106-1,TcrbS106-1\)TS1SWA_{jca}](#)

[Genotyping resources and troubleshooting](#)

Breeding Considerations

When maintaining a live colony, these mice are bred by homozygote sibling matings.

[Additional Breeding and Husbandry Support](#)

Mating System

Noncarrier x Hemizygote

Hemizygote x Noncarrier

Citation

When using the TS1(SW) mouse strain in a publication, please [cite the originating article\(s\)](#) and include MMRRC stock #43833 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](#)

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