

**B6.Cg-*Tcra*<sup>tm1Mom</sup> Tg(TcrLCMV)327Sdz/TacMmjax**

MMRRC Stock No: **37394-JAX** | TCR  $\alpha$ -; P14 TCRV $\alpha$ 2V $\beta$ 8

 Congenic, Targeted Mutation, Transgenic

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endogenous mature TCR alpha beta cells. This strain may be useful for studying CD8+ T cell activation and differentiation and as a source of donor cells for adoptive transfer for in vivo studies of inflammation, tolerance and anti-viral responses.

### Donating Investigator

Dr. Birgit Lederman, University of Zurich

Peter Mombaerts, Max Planck Research Unit for Neurogenetics

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## GENETIC OVERVIEW

Genetic Background      Generation

### Tg(TcrLCMV)327Sdz

#### Alele Type

Transgenic (Inserted expressed sequence)

### *Tcra*<sup>tm1Mom</sup>

#### Alele Type

Targeted (Null/Knockout)

#### Gene Symbol

*Tcra*

#### Gene Name

T cell receptor alpha chain

VIEW GENETICS

## RESEARCH APPLICATIONS

Immunology, Inflammation and Autoimmunity Research  
Research Tools

## Details

### Detailed Description

These mice carry a re-arranged T-cell receptor (Tcra-V2, Tcra-J TA31 / Tcrb-V8.1, Tcrb-D, Tcrb-J 2.4) specific for peptide P14 from the LCMV (lymphocytic choriomeningitis virus) in the context of H2-D<sup>b</sup>. The LCMV P14 T Cell Receptor transgenic is combined with a *Tcra* KO that does not develop endogenous mature TCR alpha beta cells. Almost all the peripheral T cells are CD8+ and express the transgenic TCR. The mice are useful for in vitro studies of CD8+ T cell activation and differentiation to cytotoxic lymphocytes and as a source of donor cells for adoptive transfer into C57BL/6 mice for in vivo studies of inflammation, tolerance and anti-viral responses.

### Development

### Expression Data

### Control Suggestions

### Selected References

## Genetics

### Tg(TcrLCMV)327Sdz

### *Tcra*<sup>tm1Mom</sup>

## Disease/Phenotype

### Disease Terms

### Research Areas By Phenotype

### Mammalian Phenotype Terms by Genotype

### References

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## 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: [Tcraalternate3](#)

QPCR: [Tg\(TcrLCMV\)327Sdz-qPCR](#)

[Genotyping resources and troubleshooting](#)

### Breeding Considerations

While maintaining a live colony, these mice are bred as double homozygotes. These mice should be considered immunodeficient and housed under the appropriate SPF conditions.

[Additional Breeding and Husbandry Support](#)

### Citation

When using the TCR  $\alpha$ -; P14 TCRV $\alpha$ 2V $\beta$ 8 mouse strain in a publication, please [cite the originating article\(s\)](#) and include MMRRC stock #37394 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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