Overview

Also Known As: OT-1

These mice contain transgenic inserts for mouse Tcra-V2 and Tcrb-V5 genes. The transgenic T cell receptor was designed to recognize ovalbumin peptide residues 257-264 (OVA_{257-264}) in the context of H2K^{b} (CD8 co-receptor interaction with MHC class I). This results in MHC class I-restricted, ovalbumin-specific, CD8+ T cells (OT-I cells). That is, the CD8 T cells of this mouse primarily recognize OVA_{257-264} when presented by the MHC I molecule. Immune response dynamics can be studied by in vivo adoptive transfer or in vitro co-culture with cells transgenic for ovalbumin or by direct administration of ovalbumin. These mice are often used to study CD8+ T cell response to antigen, positive selection, and in any research requiring CD8+ T cells of defined specificity. Like most TCR transgenics, these mice are somewhat immunodeficient.

Donating Investigator

Dr. Michael J. Bevan, U. of Washington Medical Center

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Donating Investigator

Dr. Michael J. Bevan, U. of Washington Medical Center
These OT-I mice contain transgenic inserts for mouse Tcra-V2 and Tcrb-V5 genes. The transgenic T cell receptor was designed to recognize ovalbumin residues 257-264 in the context of H2Kb and used to study the role of peptides in positive selection and the response of CD8+ T cells to antigen. Like most TCR transgenics, these mice are somewhat immunodeficient.
**Genetics**

- **Tg(TcraTcrb)1100Mjb**

**Disease/Phenotype**

**Disease Terms**

**Research Areas By Phenotype**

**Mammalian Phenotype Terms by Genotype**

**References**

**Technical Support**

**Contact Technical Support**

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**Genotyping Protocols**

- QPCR: `Tg(Tcra)1100Mjb-qPCR`
- Standard PCR: `Tg(Tcra)1100Mjb`
- Standard PCR: `Tg(Tcra)1100Mjb`
- Standard PCR: `Tg(Tcra)1100Mjb`
- Standard PCR: `Tg(Tcra)1100Mjb`
- QPCR: `Tg(Tcra)11Mjb-qPCR`

**Genotyping resources and troubleshooting**

**Dietary Information**

- LabDiet® 5K52 formulation (6% fat)

**Breeding Considerations**

- This strain is a good breeder.
- Homozygous mice are viable and fertile. Homozygous and hemizygous mice may also be bred with C57BL/6J.

**Additional Breeding and Husbandry Support**

- Mating System: Homozygote x Homozygote
- Appearance: black
- Related Genotype: `a/a`
Citation
When using the OT-1 mouse strain in a publication, please cite the originating article(s) and include JAX stock #003831 in your Materials and Methods section.

Animal Health Reports
Facility Barrier Level Descriptions

RB16 (Maximum)

Pricing & Availability

Readily Available
Sized to accommodate orders of up to 100 or more. Ask Customer Service for details.

Domestic
International
Pricing effective for USA, Canada and Mexico shipping destinations

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Related Strains

- All
- By Allele
- By Gene
- By Collection

All Related Strains