

B6C3-Tg(tetO-APPSwInd)885Dbo/Mmjax

MMRRC Stock No: 34834-JAX

 Transgenic

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Amyloid pathology is observed when the transgene is expressed. This strain has been shown to be useful in studies correlating temporal expression of mutant APP expression with Alzheimer's-like amyloid pathology.

Donating Investigator

Dr. David R Borchelt, University of Florida

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GENETIC OVERVIEW

Genetic Background

Generation

Tg(tetO-APPSwInd)885Dbo

Alele Type

Transgenic (Inducible, Inserted expressed sequence, Humanized sequence)

VIEW GENETICS

RESEARCH APPLICATIONS

Neurobiology Research

Research Tools

Mouse/Human Gene Homologs

VIEW ALL RESEARCH APPLICATIONS

Details

Detailed Description

Hemizygous mice are viable and fertile. These transgenic mice express a chimeric mouse/human amyloid precursor protein (APP) bearing the Swedish (KM570/571NL) and Indiana (V617F) mutations associated with Alzheimer's disease (APP^{swe/ind}) under the control of a tetracycline-responsive promoter element (TRE; tetO). When hemizygotes are bred with another transgenic mouse expressing reverse tetracycline-controlled transactivator protein (rtTA) or tetracycline-controlled transactivator protein (tTA) under the regulation of tissue-specific promoters, APP^{swe/ind} transgene expression can be regulated in the appropriate tissue of the bitransgenic offspring with the tetracycline analog, doxycycline.

Note that tet alone may affect neuronal degeneration and behavioral phenotypes, depending on the genetic background used (see Han et al, J. Neurosci., 2012).

When bred to a strain expressing rtTA or tTA in brain tissues (B6;CBA-Tg(Camk2a-tTA)1Mmay/J), this mutant mouse strain may be useful in studies of Alzheimer's Disease.

Development

Expression Data

Selected References

Genetics

Tg(tetO-APP^{SwInd})885Dbo

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 Tg\(APP\)](#)

[Genotyping resources and troubleshooting](#)

Breeding Considerations

When maintaining a live colony, these mice are bred as hemizygotes.

[Additional Breeding and Husbandry Support](#)

Citation

When using the B6C3-Tg(tetO-APPSwInd)885Dbo/Mmjax mouse strain in a publication, please [cite the originating article\(s\)](#) and include MMRRC stock #34834 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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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.

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LICENSING INFORMATION

Phone: 207-288-6470

Email: TechTran@jax.org

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