

B6.Cg-Mapt^{tm1Hnd} Tg(MAPT*S305S)4Gds/Mmjax

MMRRC Stock No: 34408-JAX

 Congenic, Targeted Mutation, Transgenic

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produced. S305S is associated with frontotemporal dementia with Parkinsonism linked to chromosome 17 (FTDP 17). This mutant mouse strain may be useful in studies of tau isoforms in neurodegenerative disease.

Donating Investigator

Gerard Schellenberg, University of Pennsylvania

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GENETIC OVERVIEW

Genetic Background

Generation

Mapt^{tm1Hnd}

Alele Type

Targeted (Null/Knockout)

Gene Symbol

Mapt

Gene Name

microtubule-associated protein tau

Tg(MAPT*S305S)4Gds

Alele Type

Transgenic (Inserted expressed sequence, Humanized sequence)

VIEW GENETICS

RESEARCH APPLICATIONS

Neurobiology Research

VIEW ALL RESEARCH APPLICATIONS

Details

Detailed Description

Homozygotes/Hemizygotes: Mice that are homozygous for the targeted mutation and hemizygous for the transgene are viable, fertile, normal in size and do not display any gross physical or behavioral abnormalities. These double mutant mice produce mutated human tau (*MAPT*), while no endogenous mouse tau (*Mapt*) is produced. The ht-PAC-305S transgenic mouse expresses all 6 human tau isoforms with a 3 repeat (3R)-tau to 4 repeat (4R)-tau ratio of approximately 80% 4R-tau to 20% 3R-tau rather than the expected human ratio of 1:1. S305S is associated with frontotemporal dementia with Parkinsonism linked to chromosome 17 (FTDP 17) and is believed to increase exon 10 inclusion during splicing by strengthening the weak exon 10 5' splice site. No gross or microscopic pathologic lesions were observed in these mice.

This mutant mouse strain may be useful in studies of tau isoforms in neurodegenerative disease.

Heterozygote: Not evaluated.

Development

Expression Data

Control Suggestions

Selected References

Genetics

Mapt^{tm1Hnd}

Tg(MAPT*S305S)4Gds

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:[Mapt](#)

Standard PCR:[Mapt](#)

Standard PCR:[Tg\(MAPT*S305S\)](#)

[Genotyping resources and troubleshooting](#)

Breeding Considerations

While maintaining a live colony, these mice are bred as homozygous for the targeted mutation and hemizygous for the transgene.

[Additional Breeding and Husbandry Support](#)

Citation

When using the B6.Cg-*Mapt*^{tm1Hnd} Tg(MAPT*S305S)4Gds/Mmjax mouse strain in a publication, please [cite the originating article\(s\)](#) and include MMRRC stock #34408 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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