

B6.Cg-Zbtb20 ^{Tg(PDGFB-APPSwInd)20Lms} /1J

Stock No: **004661**

 Congenic, Transgenic

Please contact Technical Support for more information

VIEW REPLACEMENT

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Mucke lab with a new stock number. Please see Stock No. **006293**.

Donating Investigator

Lennart Mucke, Gladstone Inst of Neurological Disease

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GENETIC OVERVIEW

Genetic Background

Generation

Zbtb20^{Tg(PDGFB-APPSwInd)20Lms}

Alele Type

Transgenic (Inserted expressed sequence, Humanized sequence)

VIEW GENETICS

RESEARCH APPLICATIONS

Mouse/Human Gene Homologs

Neurobiology Research

VIEW ALL RESEARCH APPLICATIONS

Details

Detailed Description

THIS STRAIN HAS BEEN FOUND TO HAVE LOW COPY NUMBER OF THE TRANSGENE AND CONSEQUENT LOSS OR DELAYED ONSET OF PHENOTYPE. THIS STRAIN IS NO LONGER AVAILABLE, AND HAS BEEN REPLACED BY THE RE-IMPORTED LINE, SEE: [STOCK NO. 006293](#).

These transgenic mice express a mutant form of the human amyloid protein precursor bearing both the Swedish (K670N/M671L) and the Indiana (V717F) mutations (*APP^{SwInd}*). Expression of the transgenic insert is directed by the human platelet-derived growth factor beta polypeptide (*PDGFB*) promoter. Hemizygotes express immunodetectable transgene product in cerebral neurons, with the highest level of expression occurring in the neocortex and hippocampus. Enzyme-linked immunosorbent assay (ELISA) analysis reveals approximate total amyloid beta peptides and 42 amino acid length amyloid beta peptides in neocortical and hippocampal tissue from mutant mice. At 5 to 7 months of age diffuse amyloid beta peptides deposition in the dentate gyrus and neocortex forms. Amyloid deposition is progressive with all transgenic mice exhibiting plaques by age 8 to 10 months. This mutant mouse strain represents a model that may be useful in studies of the pathogenesis of Familial Alzheimer's Disease and possible therapeutic treatments.

Development

Expression Data

Control Suggestions

Selected References

Genetics

Zbtb20^{Tg(PDGFB-APP^{SwInd})20Lms}

Disease/Phenotype

Disease Terms

Research Areas By Phenotype

Mammalian Phenotype Terms by Genotype

References

Technical Support

CONTACT TECHNICAL SUPPORT

Genotyping Protocols

QPCR: [Generic APP human genomic or cDNA](#)

Probe: [Generic APP human genomic or cDNA](#)

[Genotyping resources and troubleshooting](#)

Breeding Considerations

The resulting transgenic mice were then backcrossed for 12 generations on the C57BL/6J background. The strain is maintained as a hemizygote. Expected coat color is black.

[Additional Breeding and Husbandry Support](#)

Mating System

Hemizygote x Inbred

Terms Of Use

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QUESTIONS ABOUT TERMS OF USE

ADDITIONAL USE RESTRICTIONS APPLY

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LICENSING INFORMATION

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