Also Known As: C57BL/6-Tg(Thy1-APPSwDutIowa)BWevn/J, Tg-SwDI
These transgenic mice exhibit increasing expression of human amyloid beta precursor protein in the cortex, hippocampus, brain stem, and cerebellum with age. This mutant mouse strain may be useful in studies of Alzheimer’s disease.

Donating Investigator
William Van Nostrand, Stony Brook University

GENETIC OVERVIEW

<table>
<thead>
<tr>
<th>Genetic Background</th>
<th>Generation</th>
</tr>
</thead>
<tbody>
<tr>
<td>N2F4</td>
<td>2018-08-16 00:00:00</td>
</tr>
</tbody>
</table>

Tg(Thy1-APPSwDutIowa)BWevn

Allele Type
Transgenic (Inserted expressed sequence, Humanized sequence)

RESEARCH APPLICATIONS
Neurobiology Research

VIEW ALL RESEARCH APPLICATIONS
Detailed Description

These transgenic mice express neurally derived human amyloid beta-precursor protein, APP gene, 770 isoform, containing the Swedish K670N/M671L, Dutch E693Q and Iowa D694N mutations, under the control of the mouse thymus cell antigen 1, theta, Thy1, promoter. Mice hemizygous for the transgenic insert exhibit expression of human amyloid beta precursor protein in the cortex, hippocampus and brain stem with lower expression detected in the cerebellum. At age three months hemizygotes show a progressive accumulation of insoluble amyloid beta 40 and 42 peptides in brain tissue. The levels of accumulation of amyloid beta peptides is 12 to 14 fold higher in brain microvessels than in whole forebrain tissue homogenates. Fibrillar microvascular accumulations of amyloid beta peptides begin at approximately six months of age. Diffuse plaque-like deposits of amyloid beta that are similar to the plaques observed in human patients with the Dutch and Iowa familial disorders are initially detected at approximately 3 months of age in the subiculum, hippocampus and cortex. After six months of age the diffuse plaque-like deposits increase in number and spread to the olfactory bulb and thalamic region. Amyloid beta deposits are detected throughout the forebrain by 12 months of age. The donating investigator has made the strain homozygous and reports that mice homozygous for the transgenic insert are viable and fertile. This mutant mouse strain may be useful in studies of Alzheimer’s disease and cerebral amyloid angiopathy.

Development

Expression Data

Control Suggestions

Selected References

Genetics

Tg(Thy1-APPSwDutIowa)BWevn

Disease/Phenotype

Disease Terms

Research Areas By Genotype

Mammalian Phenotype Terms by Genotype

References

Technical Support

CONTACT TECHNICAL SUPPORT

Genotyping Protocols
QPCR: Generic App Version 1 QPCR
Standard PCR: Generic Tg(APP)
QPCR: Tg(APP)-alternate1
Genotyping resources and troubleshooting
Dietary Information
LabDiet® 5K52 formulation (6% fat)

Breeding Considerations
When maintaining a live colony, these mice may be bred as homozygotes.

Additional Breeding and Husbandry Support

Mating System
Homozygote x homozygote

Citation
When using the Taconic mouse strain in a publication, please cite the originating article(s) and include MMRC stock #34843 in your Materials and Methods section.

Facility Barrier Level Descriptions

The Jackson Laboratory's Genotype Promise
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.

Terms Of Use
Terms of Use
General Terms and Conditions

Additional Use Restrictions Apply
NOT AVAILABLE TO COMPANIES OR FOR COMMERCIAL USE
Strain(s) not available to companies or for-profit entities.

Licensing Information
Phone: 207-288-6470
Email: TechTran@jax.org

JAX® Mice, Products & Services Conditions of Use
"MICE" means mouse strains, their progeny derived by inbreeding or crossbreeding, unmodified derivatives from mouse strains or their progeny supplied by The Jackson Laboratory ("JACKSON"). "PRODUCT(S)" means biological materials supplied by JACKSON, and their derivatives. "SERVICES" means projects conducted by JACKSON for other parties that may include but are not limited to the use of MICE or PRODUCTS. "RECIPIENT" means each recipient of MICE, PRODUCTS, or SERVICES provided by JACKSON including each institution, its employees and other researchers under its control. MICE or PRODUCTS shall not be: (i) used for any purpose other than internal research, (ii) sold or otherwise provided to any third party for any use, or (iii) provided to any agent or other third party to provide breeding or other services. Acceptance of MICE, PRODUCTS or SERVICES from JACKSON shall be deemed as agreement by RECIPIENT to these conditions, and departure from these conditions requires JACKSON’s prior written authorization.

No Warranty
MICE, PRODUCTS AND SERVICES ARE PROVIDED "AS IS". JACKSON EXTENDS NO WARRANTIES OF ANY KIND, EITHER EXPRESS, IMPLIED, OR STATUTORY, WITH RESPECT TO MICE, PRODUCTS OR SERVICES, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, OR ANY WARRANTY OF NON-INFRINGEMENT OF ANY PATENT, TRADEMARK, OR OTHER INTELLECTUAL PROPERTY RIGHTS.
Credit for PRODUCTS or SERVICES
In case of dissatisfaction for a valid reason and claimed in writing by a purchaser within ninety (90) days of receipt of, PRODUCTS or SERVICES, JACKSON will, at its option, provide credit or replacement for the PRODUCT received or the SERVICES provided; JACKSON makes no other representations and this shall be the exclusive remedy of the purchaser. Please note specific policy for live mice.

Animal Care and Use for SERVICES
Consistent with the requirement for a written understanding regarding animal care and use, the JACKSON Animal Care and Use Committee will review the animal care and use protocol(s) associated with any SERVICES to be performed at JACKSON, and JACKSON shall have ultimate responsibility and authority for the care of animals while on site or in JACKSON custody.

No Liability
In no event shall JACKSON, its trustees, directors, officers, employees, and affiliates be liable for any causes of action or damages, including any direct, indirect, special, or consequential damages, arising out of the provision of MICE, PRODUCTS, or SERVICES, including economic damage or injury to property and lost profits, and including any damage arising from acts or negligence on the part of JACKSON, its agents or employees. Unless prohibited by law, in purchasing or receiving MICE, PRODUCTS, or SERVICES from JACKSON, purchaser or recipient, or any party claiming by or through them, expressly releases and discharges JACKSON from all such causes of action or damages, and further agrees to defend and indemnify JACKSON from any costs or damages arising out of any third party claims.

MICE, PRODUCTS or SERVICES are to be used in a safe manner and in accordance with all applicable governmental rules and regulations.
The foregoing represents the General Terms and Conditions applicable to JACKSON’s MICE, PRODUCTS or SERVICES. In addition, special terms and conditions of sale of certain MICE, PRODUCTS, or SERVICES may be set forth separately in JACKSON web pages, catalogs, price lists, contracts, and/or other documents, and these special terms and conditions shall also govern the sale of these MICE, PRODUCTS and SERVICES by JACKSON, and by its licensees and distributors.
Acceptance of delivery of MICE, PRODUCTS or SERVICES shall be deemed agreement to these terms and conditions. No purchase order or other document transmitted by purchaser or recipient that may modify the terms and conditions hereof, shall be in any way binding on JACKSON, and instead the terms and conditions set forth herein, including any special terms and conditions set forth separately, shall govern the sale of MICE, PRODUCTS or SERVICES by JACKSON.

Related Strains

- All
- By Allele
- By Gene
- By Collection

All Related Strains
Leading the search for
TOMORROW'S CURES