The Jackson Laboratory

B6.Cg-*Tpo* $^{tee\text{-}2J}$ *H2* ^{g7}/GrsrJ

Stock No: **007852**

Major Histocompatibility Congenic, Spontaneous Mutation

Please contact Technical Support for more information

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This thyroid peroxidase mutant is useful for studies related to thyroid hormone and thyroid function. Homozygotes have dysplastic thyroid glands, severe proportional dwarfing, and delayed cochlear development with severe hearing deficit due to a lack of thyroid hormone production.

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GENETIC OVERVIEW

Genetic Background **Generation**

Tpo$^{tee\text{-}2J}$

Allele Type	Gene Symbol	Gene Name
Spontaneous	*Tpo*	thyroid peroxidase

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RESEARCH APPLICATIONS

Metabolism Research
Endocrine Deficiency Research
Developmental Biology Research
Internal/Organ Research
Sensorineural Research
Reproductive Biology Research

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Details

Detailed Description

Mice homozygous for the teeny 2 Jackson mutation are proportional dwarfs, distinctly smaller than their heterozygous siblings. This is evident by one week of age. These mutants are severely hypothyroid with undetectable levels of T4 at 5 to 8 weeks of age. The thyroid glands are dysplastic with poorly developed follicles and hyperproliferation of epithelial cells. Although no defects have been found in the eyes, these mutants have highly elevated ABR thresholds at 4 weeks of age, the earliest age assessed, indicative of severe hearing impairment. The cochlear development is delayed and, although the cochlea resembles a normal cochlea by 1 month of age, the tectorial membrane remains abnormally thickened. Homozygotes fail to breed.

Development

Selected References

Genetics

Tpo$^{tee\text{-}2J}$

Disease/Phenotype

Disease Terms

Research Areas By Phenotype

Mammalian Phenotype Terms by Genotype

References

Technical Support

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Genotyping Protocols
Standard PCR:Tpo
Genotyping resources and troubleshooting

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