This transgenic line expresses the human ERBB2 (HER2) gene in mammary gland and brain, displays tolerance to ERBB2 antigen and may be useful in testing ERBB2-based vaccines and immunotherapies.

Donating Investigator
Wei-Zen Wei, Wayne State University

GENETIC OVERVIEW

**Genetic Background**

*Pds5b* Tg(Wap-ERBB2)229Wzw

**Allele Type**

Transgenic (Null/Knockout, Inserted expressed sequence, Humanized sequence)

RESEARCH APPLICATIONS

Research Tools
Immunology, Inflammation and Autoimmunity Research
Developmental Biology Research
Cancer Research
Mice that are hemizygous for the transgene are viable, fertile, normal in size and do not display any gross physical or behavioral abnormalities. These transgenic mice express human ERBB2 (HER2) under the control of the mouse whey acid protein promoter (Wap). The Wap promoter directs expression to the mammary gland and molecular layer of the cerebellum. Mice do not develop spontaneous tumors, but are tolerant to ERBB2 tumor associated antigen, developing tumors after inoculation with ERBB2 expressing tumor cells. Anti-tumor immunity can be induced using aggressive DNA vaccination. This mutant mouse strain may be useful in testing ERBB2-based vaccines and immunotherapies.

Sequencing has identified the transgene integration site as intron 2 of the Pds5b gene (PDS5 cohesin associated factor B) on chromosome 5. The 162 copy (approx 1.1 Mb) integration disrupts Pds5b rendering it a null allele. Embryos homozygous for the mutation are severely underdeveloped with jaundice and disruptions to limb and facial formation by E14-15, no embryos survive to birth.
Genotyping Protocols
Standard PCR: Tg(Wap-ERBB2)229Wzw STD PCR
Genotyping resources and troubleshooting

Breeding Considerations
While maintaining a live colony, these mice are bred as hemizygotes. Homozygotes are embryonic lethal.

Additional Breeding and Husbandry Support

Citation
When using the B6.Cg-Pds5b <sup>Tg(Wap-ERBB2)229Wzw</sup> /J mouse strain in a publication, please cite the originating article(s) and include JAX stock #010562 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

Pricing & Availability

Typically mice are recovered in 10-14 weeks. Contact Customer Service to place an order or for more information.

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- By Allele
- By Gene
- By Collection

All Related Strains