Overview

Also Known As: thyroid dyshormonogenesis

These mice carry a recessive spontaneous mutation of the Duox2 gene that results in a defect in thyroid hormone synthesis.
The mouse Duox2<sup>thyd</sup> mutation provides a genetic model for studying the specific function of DUOX2 in the thyroid gland and in other organ systems where it is hypothesized to play a role. The Duox2<sup>thyd</sup> mutation is mapped to chromosome 2 and identified as a T>G base pair change in exon 16 of Duox2. The mutation changes a highly conserved valine to glycine at amino acid position 674 (V674G) and was named "thyroid dyshormonogenesis" to signify a defect in thyroid hormone synthesis. Thyroid glands of mutant mice are goitrous and contain few normal follicles, and anterior pituitaries are dysplastic. Serum T(4) in homozygotes is about one-tenth the level of controls and is accompanied by a more than 100-fold increase in TSH. The weight of adult mutant mice is approximately half that of littermate controls, and serum IGF-I is reduced. The cochleae of mutant mice exhibit abnormalities characteristic of hypothyroidism, including a delayed formation of the inner sulcus and tunnel of Corti and an abnormally thickened tectorial membrane. Hearing thresholds of adult mutant mice are on average 50-60 decibels (dB) above those of controls.
Genotyping Protocols
Sanger sequencing: Duox<sup>thyd</sup>
Genotyping resources and troubleshooting

Citation
When using the thyroid dyshormonogenesis mouse strain in a publication, please cite the originating article(s) and include JAX stock #005543 in your Materials and Methods section.

Animal Health Reports
Production of mice from cryopreserved embryos or sperm occurs in a maximum barrier room, G200

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

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<th>SERVICE/PRODUCT</th>
<th>DESCRIPTION</th>
<th>PRICE</th>
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<tr>
<td>Cryo Recovery</td>
<td>Heterozygous or wildtype for Duox&lt;sup&gt;thyd&lt;/sup&gt;</td>
<td>$2,854.50</td>
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- By Allele
- By Gene
- By Collection

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