

B6 x STOCK *Tyr^{c-ch}* *Bmp5^{se}* +/+ *Myo6^{sv}* /J

Stock No: **000578** | Snell's waltzer

 Spontaneous Mutation

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

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hyperactivity. The Snell's waltzer mutation is maintained in repulsion with the closely linked short ear mutation (*Bmp5^{se}*), both located on Chromosome 9, on the stock that is homozygous for chinchilla (*Tyr^{c-ch}*).

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GENETIC OVERVIEW

Genetic Background

Generation

Tyr^{c-ch}

Alele Type

Spontaneous

Gene Symbol

Tyr

Gene Name

tyrosinase

Bmp5^{se}

Alele Type

Spontaneous

Gene Symbol

Bmp5

Gene Name

bone morphogenetic protein 5

Myo6^{sv}

Alele Type

Spontaneous

Gene Symbol

Myo6

Gene Name

myosin VI

VIEW GENETICS

RESEARCH APPLICATIONS

Developmental Biology Research
Neurobiology Research
Sensorineural Research
Cell Biology Research
Mouse/Human Gene Homologs
Dermatology Research

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BASE PRICE

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\$2,854.50 Domestic price Cryo Recovery

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[Detailed Description](#)

Mice homozygous for the Snell's waltzer spontaneous mutation ($Myo6^{sv}$) show to a marked degree the typical circling, head-tossing, deafness, and hyperactivity of other mutant mice of this type. Homozygous mutant mice are recognizable by the age of 1 week. The abnormalities of the inner ear consist of degeneration of the entire neuroepithelium comprising the organ of Corti, the saccular and utricular maculae, and the cristae of all three semicircular canals. Although viability of homozygotes is nearly normal, breeding ability is reduced and males are more reliable breeders than females.

Specific cytoskeletal components are critical for specific cellular structures. The microvilli of intestinal brush border cells in $Myo6^{sv}$ homozygotes are shorter than normal. While myosin 6 is not critical for the development of hair cell stereocilia, it is essential for their maintenance. At birth the stereocilia appear nearly normal with only occasional stereocilia showing early signs of fusion at their bases, but by 3 days of age most hair cells appear disorganized with full fusing of stereocilia. Continued degeneration yields giant stereocilia by 20 days of age and degeneration of the inner and outer hair cells in the organ of Corti by 6 weeks of age. Reissner's membrane, the stria vascularis, and the spiral ganglion appear normal. At 20 or 30 days of age, direct cochlear stimulation failed to elicit a compound action potential or cochlear microphonic response indicating deafness in $Myo6^{sv}$ homozygotes. A mutation in human $MYO6$ has been associated with a nonsyndromic dominant form of deafness. (Deol and Green, 1966; Avraham et al., 1995; Self et al., 1999; Melchoinda et al., 2001; Buss et al., 2001.)

Although myosin 6 co-localization with clathrin-coated pits suggests a role in endocytosis, Self et al. reported uptake of the membrane dye FM1-43 by hair cells of 1 and 3 day old $Myo6^{sv}$ mutant mice indicating that endocytosis by hair cells does not require MYO6. Fibroblast cell lines from mice homozygous for the $Myo6^{sv}$ mutation have a 40% reduction in the level of *trans*-Golgi network secretion to the plasma membrane paralleling a 40% reduction in Golgi volume. Additionally, the mutant Golgi complexes are smaller and more fragmented than normal. Transfection of fibroblasts from $Myo6^{sv}$ homozygotes with full length myosin 6 returns the Golgi morphology and secretion to normal. (Self et al., 1999; Warner et al., 2003.) In addition to cochlear defects, homozygous mice exhibit a significant reduction in the amplitude of a and b waves as measured by electroretinogram, although there is no photoreceptor cell loss. (Kitamoto et al., 2005)

The Snell's waltzer mutation is maintained in repulsion with the closely linked short ear mutation (*Bmp^{se}*), both located on Chromosome 9.

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[+ *Tyr^{c-ch}*](#)

[+ *Bmp5^{se}*](#)

[+ *Myo6^{sv}*](#)

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[- Technical Support](#)

C O N T A C T T E C H N I C A L S U P P O R T

Genotyping Protocols

Pyrosequencing:[Bmp5](#)

Separated PCR:[Myo6](#)

[Genotyping resources and troubleshooting](#)

Citation

When using the Snell's waltzer mouse strain in a publication, please [cite the originating article\(s\)](#) and include JAX stock #000578 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

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SERVICE/PRODUCT	DESCRIPTION	PRICE
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