

SLITRK6 gene

SLIT and NTRK like family member 6

Normal Function

The *SLITRK6* gene provides instructions for making a protein that is found primarily in the inner ear and the eye. This protein promotes growth and survival of nerve cells (neurons) in the inner ear that transmit sound (auditory) signals. It also controls (regulates) the growth of the eye after birth. In particular, the SLITRK6 protein influences the length of the eyeball (axial length), which affects whether a person will be nearsighted or farsighted, or will have normal vision. The SLITRK6 protein spans the cell membrane, where it is anchored in the proper position to perform its function.

Health Conditions Related to Genetic Changes

Deafness and myopia syndrome

At least three *SLITRK6* gene mutations have been identified in people with deafness and myopia syndrome, a disorder that causes both hearing loss and severe nearsightedness (high myopia). The mutations that cause deafness and myopia syndrome result in an abnormally short SLITRK6 protein that is not anchored properly to the cell membrane. As a result, the protein is unable to function normally. Impaired SLITRK6 protein function leads to abnormal nerve development in the inner ear and improperly controlled eyeball growth, resulting in the hearing loss and nearsightedness that occur in deafness and myopia syndrome.

Other Names for This Gene

- 4832410J21Rik
- DFNMYP
- FLJ22774
- SLIT and NTRK-like family, member 6
- SLIT and NTRK-like protein 6 precursor
- slit and trk like gene 6

Additional Information & Resources

Tests Listed in the Genetic Testing Registry

- Tests of SLITRK6 ([https://www.ncbi.nlm.nih.gov/gtr/all/tests/?term=84189\[geneid\]](https://www.ncbi.nlm.nih.gov/gtr/all/tests/?term=84189[geneid]))

Scientific Articles on PubMed

- PubMed (<https://pubmed.ncbi.nlm.nih.gov/?term=%28%28SLITRK6%5BTIAB%5D%29+OR+%28SLIT+and+NTRK-like+family,+member+6%5BTIAB%5D%29+OR+%28DFNMYP%5BTIAB%5D%29+OR+%28SLIT+and+NTRK-like+protein+6+precursor%5BTIAB%5D%29+OR+%28slit+and+trk+like+gene+6%5BTIAB%5D%29%29+AND+%28%28Genes%5BMH%5D%29+OR+%28Genetic+Phenomena%5BMH%5D%29%29+AND+english%5Bla%5D+AND+human%5Bmh%5D%29%29>)

Catalog of Genes and Diseases from OMIM

- SLIT- AND NTRK-LIKE FAMILY, MEMBER 6; SLITRK6 (<https://omim.org/entry/609681>)

Gene and Variant Databases

- NCBI Gene (<https://www.ncbi.nlm.nih.gov/gene/84189>)
- ClinVar ([https://www.ncbi.nlm.nih.gov/clinvar?term=SLITRK6\[gene\]](https://www.ncbi.nlm.nih.gov/clinvar?term=SLITRK6[gene]))

References

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nlm.nih.gov/23543054) or Free article on PubMed Central (<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3635725/>)

Genomic Location

The *SLITRK6* gene is found on chromosome 13 (<https://medlineplus.gov/genetics/chromosome/13/>).

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