

S502= — WFS1 Molecular Atlas Card

Variant type: Synonymous (silent)

Codon: position 502 (Serine, S) — amino acid unchanged

Domain context: Transmembrane helix 7

SCHEMA CATEGORY: SILENT — SILENT — NO AMINO-ACID CHANGE

No amino-acid change (S502 is unchanged): the codon is altered but the protein sequence is identical to wild-type. No structural, stability or AlphaMissense effect applies. Synonymous variants are typically benign unless they affect splicing or regulatory elements; this one is not adjacent to an exon boundary.

CLINICAL EVIDENCE

- **Classification:** Conflicting classifications of pathogenicity
- **Review status:** criteria provided, conflicting classifications
- **Associated conditions:** Cataract 41; Wolfram-like syndrome; Autosomal dominant nonsyndromic hearing loss 6; Type 2 diabetes mellitus; Wolfram syndrome 1
- **cDNA change:** c.1506C>T
- **ClinVar accession:** VCV001644684
- **Last evaluated:** 2025/09/08 00:00
- **Submissions:** 1

Card generated by wolfram-atlas-batch (synonymous pipeline) on 2026-06-08T02:54:03.576617Z.

WFS1: UniProt O76024, AlphaFold v6. Synonymous variants carry no protein-structural effect.