

L459= — WFS1 Molecular Atlas Card

Variant type: Synonymous (silent)

Codon: position 459 (Leucine, L) — amino acid unchanged

Domain context: Cytoplasmic loop 3

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

No amino-acid change (L459 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:** Likely benign
- **Review status:** criteria provided, multiple submitters, no conflicts
- **Associated conditions:** Wolfram syndrome 1; Wolfram-like syndrome; Cataract 41; Autosomal dominant nonsyndromic hearing loss 6; Type 2 diabetes mellitus
- **cDNA change:** c.1377G>A
- **ClinVar accession:** VCV001670532
- **Last evaluated:** 2025/08/29 00:00
- **Submissions:** 1

Card generated by wolfram-atlas-batch (synonymous pipeline) on 2026-06-08T02:53:29.489135Z.

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