

# V412= — WFS1 Molecular Atlas Card

**Variant type:** Synonymous (silent)

**Codon:** position 412 (Valine, V) — amino acid unchanged

**Domain context:** Transmembrane helix 4

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## SCHEMA CATEGORY: SILENT — SILENT — BUT NEAR AN EXON BOUNDARY (SPLICE EFFECT POSSIBLE)

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No amino-acid change (V412 is unchanged), so there is no protein-level structural or stability effect. However, this codon sits within 3 residues of the exon junction near protein position 412 — close enough that the nucleotide change could perturb splicing. Worth a SpliceAI check (Wave 2); otherwise expected to be benign at the protein level.

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## CLINICAL EVIDENCE

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- **Classification:** Benign/Likely benign
- **Review status:** criteria provided, multiple submitters, no conflicts
- **Associated conditions:** Wolfram syndrome 1
- **cDNA change:** c.1236C>T
- **ClinVar accession:** VCV000666780
- **Last evaluated:** 2022/11/04 00:00
- **Submissions:** 1

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Card generated by *wolfram-atlas-batch* (synonymous pipeline) on 2026-06-08T02:53:08.904592Z.

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