

# c.1401\_1403del — WFS1 Molecular Atlas Card

**Variant type:** In-frame indel

**Change:** 1 residue(s) deleted in frame at position 467

**Domain context:** Transmembrane helix 6

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## SCHEMA CATEGORY: I1 — SINGLE-RESIDUE DELETION IN A TRANSMEMBRANE HELIX — LIKELY CATASTROPHIC KINK

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A single residue removed inside Transmembrane helix 6 shifts the helical register, which typically kinks or unwinds the helix and disrupts membrane insertion — structurally similar to a severe TM missense. Gene therapy track. Predicted structure pending (ColabFold).

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## STRUCTURAL PREDICTION

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- **Reading frame:** preserved (in-frame) — no premature stop, NMD does not apply.
- **Affected domain:** Transmembrane helix 6
- **Predicted modified structure:** \_pending — AlphaFold/ColabFold prediction of the modified sequence and backbone-RMSD vs wild-type backfill here (Wave 2).\_  
[backfill here \(Wave 2\).](#)

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## CLINICAL EVIDENCE

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- **Classification:** Pathogenic/Likely pathogenic
- **Review status:** criteria provided, multiple submitters, no conflicts
- **Associated conditions:** Wolfram syndrome 1
- **cDNA change:** c.1401\_1403del
- **ClinVar accession:** VCV001070757
- **Last evaluated:** 2025/01/26 00:00
- **Submissions:** 1

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Card generated by `wolfram-atlas-batch` (in-frame indel pipeline) on 2026-06-08T02:41:11.860074Z.

Schema: `reference/card schemaextension.md` (I1–I3). WFS1: UniProt O76024, AlphaFold v6.