

# c.1661\_1687del — WFS1 Molecular Atlas Card

**Variant type:** In-frame indel

**Change:** 9 residue(s) deleted in frame at position 554

**Domain context:** Luminal loop 4

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## SCHEMA CATEGORY: I3 — MULTI-RESIDUE IN-FRAME INDEL — LIKELY MAJOR STRUCTURAL DISRUPTION

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9 residues removed in frame around position 554 (Luminal loop 4). A change this size usually perturbs local packing and can propagate to the fold. Gene therapy is the primary path unless an AlphaFold prediction of the modified sequence shows a surprisingly intact fold. 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:** Luminal loop 4
- **Predicted modified structure:** \_pending — AlphaFold/ColabFold prediction of the

modified sequence and backbone-RMSD vs wild-type backfill here (Wave 2).\_

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## CLINICAL EVIDENCE

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- **Classification:** Pathogenic
- **Review status:** criteria provided, single submitter
- **cDNA change:** c.1661\_1687del
- **ClinVar accession:** VCV002418917
- **Last evaluated:** 2025/04/13 00:00
- **Submissions:** 1

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Card generated by `wolfram-atlas-batch` (in-frame indel pipeline) on 2026-06-08T02:41:29.302001Z.

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