

## Technical Data Sheet

### Human SUMF1 Protein (C-His)

**Catalog Number:** 601801, 601802  
**Size:** 25 ug, 100 ug  
**Target Name:** SUMF1, Formylglycine-generating enzyme  
**Regulatory Status:** RUO

#### Product Details

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**Application:** ELISA, BLI  
**Format:** Liquid, Purified  
**Expression Host:** HEK293  
**Species:** Human  
**Accession Number:** Q8NBK3  
**Sources:** Recombinant human SUMF1 protein (Ser34-Asp374) with C-terminus His tag was expressed in 293 Cells.  
**Molecular Weight:** This protein has a predicted molecular weight of 38.8 kDa. Under DTT-reducing conditions, the protein migrates at approximately 40-45 kDa on SDS-PAGE.  
**Affinity Tag:** C-His  
**Purity:** >95% based on SDS-PAGE under reducing condition  
**Formulation:** 25 mM HEPES, 150 mM NaCl, 10% Glycerol, pH 7.4  
**Endotoxin level:** Not tested  
**Protein Concentration:** 25µg size is bottled at 0.2mg/mL concentration. 100 µg size is supplied at a lot-specific concentration.  
**Storage and Handling:** Briefly centrifuge the vial upon receipt. An unopened vial can be stored at 4°C for up to 2 weeks, or at -20°C or below for up to six months. The protein may be further diluted to 0.1 mg/mL using 0.22 µm-filtered HEPES buffer (pH 7.4). For long-term storage, the diluted stock solution should be aliquoted and stored at ≤ -70°C to minimize freeze-thaw cycles. If additional dilution is required, carrier proteins such as FBS or BSA should be added to maintain protein stability.

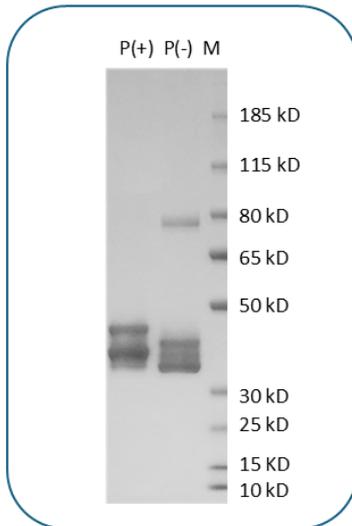
#### Background Information

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Human SUMF1 (also known as formylglycine-generating enzyme, FGE) is a 42 kDa soluble glycoprotein located in the endoplasmic reticulum (ER) lumen. It activates sulfatases by converting a cysteine residue in their catalytic site into a formylglycine, a modification essential for sulfatase function. SUMF1 can form monomers, disulfide-linked homodimers, or heterodimers with SUMF2. It is a Ca<sup>2+</sup>-binding protein and exists in three splice isoforms. Mature human SUMF1 shares 90% amino acid identity with its mouse counterpart.

#### Product Data

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Purified Human SUMF1 final product on SDS-PAGE under reducing (P+) and non-reducing (P-) conditions. The purity of Human SUMF1 appears to be greater than 95% based on reducing condition. The bands around 75 kDa in non-reducing is a dimer. The multiple bands at reducing conditions may be due to glycosylation and proteolytic truncation.