

## ATP6V1F Protein, Human (GST)

<b>Cat. No.:</b>	HY-P76159
<b>Synonyms:</b>	V-type proton ATPase subunit F; V-ATPase subunit F; V-ATPase 14 kDa subunit; ATP6S14; VATF
<b>Species:</b>	Human
<b>Source:</b>	E. coli
<b>Accession:</b>	Q16864 (M1-R119)
<b>Gene ID:</b>	9296
<b>Molecular Weight:</b>	Approximately 40 kDa.

### PROPERTIES

<b>Biological Activity</b>	The enzyme activity of this recombinant protein is testing in progress, we cannot offer a guarantee yet.
<b>Appearance</b>	Lyophilized powder.
<b>Formulation</b>	Lyophilized from a 0.2 $\mu$ m filtered solution of PBS, pH 7.4. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization.
<b>Endotoxin Level</b>	<1 EU/ $\mu$ g, determined by LAL method.
<b>Reconstitution</b>	It is not recommended to reconstitute to a concentration less than 100 $\mu$ g/mL in ddH <sub>2</sub> O.
<b>Storage &amp; Stability</b>	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
<b>Shipping</b>	Room temperature in continental US; may vary elsewhere.

### DESCRIPTION

#### Background

ATP6V1F, a vital subunit of the V1 complex of vacuolar(H<sup>+</sup>)-ATPase (V-ATPase), constitutes part of the multisubunit enzyme that plays a central role in cellular pH regulation. This enzyme is a heteromultimeric assembly comprising two essential complexes: the ATP-hydrolytic V1 complex and the proton translocation V0 complex. Within the V1 complex, ATP6V1F contributes to the formation of the catalytic AB heterodimers, constituting a heterohexamer, and the peripheral stalks comprised of EG heterodimers. Additionally, it is an integral part of the central rotor, working in concert with subunit D. The V1 complex is responsible for ATP hydrolysis, whereas the V0 complex, in which ATP6V1F is not directly mentioned but is implied, is crucial for proton translocation across membranes. This proton transport involves various subunits, including the proton transport subunit a, a ring of proteolipid subunits c9c'', rotary subunit d, subunits e and f, and accessory subunits ATP6AP1/Ac45 and ATP6AP2/PRR. The cooperative action of these subunits underscores the significance of ATP6V1F in the intricate machinery of V-ATPase, which acidifies and maintains pH in cellular compartments and, in certain cell types, at the plasma membrane, thereby influencing various physiological processes.

---

**Caution: Product has not been fully validated for medical applications. For research use only.**

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: [tech@MedChemExpress.com](mailto:tech@MedChemExpress.com)

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA