

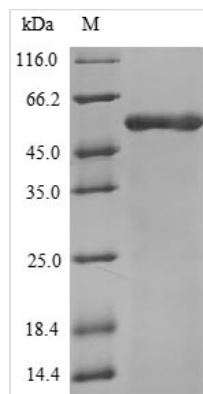


# Recombinant Human ATP synthase subunit beta, mitochondrial (ATP5F1B)

<b>Product Code</b>	CSB-YP002350HU
<b>Relevance</b>	Mitochondrial membrane ATP synthase (F1F0 ATP synthase or Complex V) produces ATP from ADP in the presence of a proton gradient across the membrane which is generated by electron transport complexes of the respiratory chain. F-type ATPases consist of two structural domains, F1 - containing the extramembraneous catalytic core, and F0 - containing the membrane proton channel, linked together by a central stalk and a peripheral stalk. During catalysis, ATP synthesis in the catalytic domain of F1 is coupled via a rotary mechanism of the central stalk subunits to proton translocation. Subunits alpha and beta form the catalytic core in F1. Rotation of the central stalk against the surrounding alpha3beta3 subunits leads to hydrolysis of ATP in three separate catalytic sites on the beta subunits.
<b>Storage</b>	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.
<b>Uniprot No.</b>	P06576
<b>Product Type</b>	Recombinant Protein
<b>Immunogen Species</b>	Homo sapiens (Human)
<b>Purity</b>	Greater than 90% as determined by SDS-PAGE.
<b>Sequence</b>	AQTSPSPKAGAATGRIVAVIGAVVDVQFDEGLPPILNALEVQGRETRLVLEVAQ HLGESTVRTIAMDGTEGLVRGQKVLDSGAPIKIPVGPETLGRIMNVIGEPIDER GPIKTKQFAPIHAEAPEFMEMSVEQEILVTGIKVVDLLAPYAKGGKIGLFGGAGV GKTVLIMELINNVAKAHGGYSVFAGVGERTREGNDLYHEMIESGVINLKDATSK VALVYQQMNEPPGARARVALTGLTVAEYFRDQEGQDVLLFIDNIFRFTQAGSE VSALLGRIPSAVGYQPTLATDMGMTMERITTTKKGSITSVQAIYVPADDLTDP PATTF AHLDATTVLSRAIAELGIYPAVDPLDSTSRIMDPNIVGSEHYDVARGVQK ILQDYKSLQDIIAILGMDELSEEDKLT VSRARKIQRFLSQPFQVAEVFTGHMGKL VPLKETIKGFQQILAGEYDHLPEQAFYMGPIEEAVAKADKLAEHSS
<b>Lead Time</b>	3-7 business days
<b>Research Area</b>	Tags & Cell Markers
<b>Source</b>	Yeast
<b>Gene Names</b>	ATP5F1B
<b>Protein Names</b>	Recommended name: ATP synthase subunit beta, mitochondrial EC= 3.6.3.14
<b>Expression Region</b>	48-529aa
<b>Notes</b>	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.



<b>Tag Info</b>	N-terminal 6xHis-tagged
<b>Mol. Weight</b>	53.8kDa
<b>Protein Description</b>	Full Length of Mature Protein

**Image**


(Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5% enrichment gel and 15% separation gel.

**Description**

Human ATP synthase subunit beta, mitochondrial (ATP5F1B) amino acids 48-529 with a 6xHis-tag at the N-terminus were expressed in the yeast. The resulting protein is the recombinant full-length of mature human ATP5F1B protein. The purity of this protein is greater than 90% determined by SDS-PAGE. The observed molecular weight was about 54 kDa. And recombinant ATP5F1B proteins are in-stock now. This recombinant protein may be used to produce specific antibodies against ATP5F1B or in the research area of tags & cell markers.

ATP5F1B, the membrane-extrinsic sector of ATP synthase, is the catalytic part in which ATP is formed from ADP and inorganic phosphate. The catalytic  $\beta$  subunits can adopt different conformations and bind to Mg-ADP ( $\beta$ DP), Mg-ATP ( $\beta$ TP), or remain empty ( $\beta$ E). ATP5F1B catalyzes ATP synthesis by utilizing the electrochemical gradient of protons across the inner membrane during oxidative phosphorylation. ATP synthase not only synthesizes ATP but is also critical for the architecture of the mitochondrial inner membrane.

**Reconstitution**

We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Please reconstitute protein in deionized sterile water to a concentration of 0.1-1.0 mg/mL. We recommend to add 5-50% of glycerol (final concentration) and aliquot for long-term storage at -20°C/-80°C. Our default final concentration of glycerol is 50%. Customers could use it as reference.