

ATP5F1B Protein, Human (P.pastoris, His)

Cat. No.:	HY-P71716
Synonyms:	ATP 5B; ATP synthase H ⁺ transporting mitochondrial F1 complex beta polypeptide; ATPB; ATPB_HUMAN; ATPMB; ATPSB
Species:	Human
Source:	P. pastoris
Accession:	P06576 (48A-529S)
Gene ID:	506
Molecular Weight:	Approximately 53.8 kDa

PROPERTIES

AA Sequence

A Q T S P S P K A G	A A T G R I V A V I	G A V V D V Q F D E	G L P P I L N A L E
V Q G R E T R L V L	E V A Q H L G E S T	V R T I A M D G T E	G L V R G Q K V L D
S G A P I K I P V G	P E T L G R I M N V	I G E P I D E R G P	I K T K Q F A P I H
A E A P E F M E M S	V E Q E I L V T G I	K V V D L L A P Y A	K G G K I G L F G G
A G V G K T V L I M	E L I N N V A K A H	G G Y S V F A G V G	E R T R E G N D L Y
H E M I E S G V I N	L K D A T S K V A L	V Y G Q M N E P P G	A R A R V A L T G L
T V A E Y F R D Q E	G Q D V L L F I D N	I F R F T Q A G S E	V S A L L G R I P S
A V G Y Q P T L A T	D M G T M Q E R I T	T T K K G S I T S V	Q A I Y V P A D D L
T D P A P A T T F A	H L D A T T V L S R	A I A E L G I Y P A	V D P L D S T S R I
M D P N I V G S E H	Y D V A R G V Q K I	L Q D Y K S L Q D I	I A I L G M D E L S
E E D K L T V S R A	R K I Q R F L S Q P	F Q V A E V F T G H	M G K L V P L K E T
I K G F Q Q I L A G	E Y D H L P E Q A F	Y M V G P I E E A V	A K A D K L A E E H
S S			

Biological Activity The enzyme activity of this recombinant protein is testing in progress, we cannot offer a guarantee yet.

Appearance Lyophilized powder.

Formulation Lyophilized after extensive dialysis against solution in Tris-based buffer, 50% glycerol.

Endotoxin Level <1 EU/μg, determined by LAL method.

Reconstitution It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH₂O.

Storage & Stability 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.

Shipping Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background

The ATP5F1B protein is an integral part of the mitochondrial membrane ATP synthase, also known as Complex V, responsible for ATP production from ADP in the presence of a proton gradient across the membrane generated by the electron transport complexes of the respiratory chain. F-type ATPases are composed of two structural domains: F(1), which houses the extramembraneous catalytic core, and F(0), containing the membrane proton channel. These domains are interconnected by a central stalk and a peripheral stalk. During the catalytic process, ATP synthesis in the F(1) domain is coupled to proton translocation through a rotary mechanism of the central stalk subunits. The catalytic core in F(1) is formed by subunits alpha and beta, where the rotation of the central stalk against the surrounding alpha(3)beta(3) subunits leads to the hydrolysis of ATP in three separate catalytic sites on the beta subunits. ATP5F1B plays a crucial role in this intricate process, contributing to the efficient synthesis of ATP within the mitochondrial membrane.

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

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