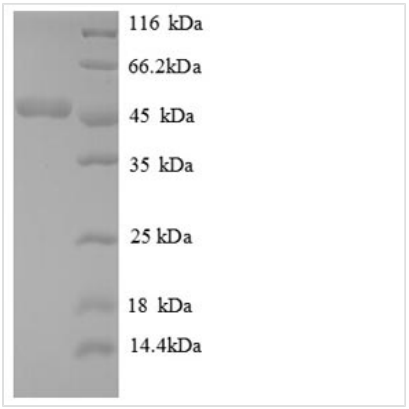
Recombinant Human ATP synthase subunit O, mitochondrial (ATP5PO)

Product Code	CSB-EP002379HU
Relevance	Mitochondrial mbrane ATP synthase (F1F0 ATP synthase or Complex V) produces ATP from ADP in the presence of a proton gradient across the mbrane which is generated by electron transport complexes of the respiratory chain. F-type ATPases consist of two structural domains, F1 - containing the extrambraneous catalytic core and F0 - containing the mbrane 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. Part of the complex F0 domain and the peripheric stalk, which acts as a stator to hold the catalytic alpha3beta3 subcomplex and subunit a/ATP6 static relative to the rotary elents.
Abbreviation	Recombinant Human ATP5O protein
Storage	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.
Uniprot No.	P48047
Alias	Oligomycin sensitivity conferral protein ;OSCP
Product Type	Recombinant Protein
Immunogen Species	Homo sapiens (Human)
Purity	Greater than 90% as determined by SDS-PAGE.
Sequence	FAKLVRPPVQVYGIEGRYATALYSAASKQNKLEQVEKELLRVAQILKEPKVAAS VLNPYVKRSIKVKSLNDITAKERFSPLTTNLINLLAENGRLSNTQGVVSAFSTMM SVHRGEVPCTVTSASPLEEATLSELKTVLKSFLSQGQVLKLEAKTDPSILGGMI VRIGEKYVDMSVKTKIQKLGRAMREIV
Research Area	Metabolism
Source	E.coli
Target Names	ATP5PO
Expression Region	24-213aa
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
Tag Info	N-terminal GST-tagged
Mol. Weight	47.9kDa
Protein Length	Full Length of Mature Protein
Image	



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

Description

Amino acids 24-213 constitute the expression domain of recombinant Human ATP5O. This ATP5O protein is expected to have a theoretical molecular weight of 47.9 kDa. This protein is generated in a e.coli-based system. The N-terminal GST tag was fused into the coding gene segment of ATP5O, making it easier to detect and purify the ATP5O recombinant protein in the later stages of expression and purification.

The research on ATP synthase subunit O, mitochondrial (ATP5PO) covers the fields of cell biology, mitochondrial biology, and diseases related to metabolism. ATP5PO is a subunit within the mitochondria, belonging to the ATP synthase complex. One of the prominent areas of study is its crucial role in cellular energy production. Researchers focus on the role of ATP5PO in the mitochondrial respiratory chain, particularly its involvement in the formation of the ATP synthase complex and the mechanisms of catalytic reactions. Additionally, ATP5PO is associated with the pathogenesis of many diseases, especially those related to mitochondrial dysfunction and disruptions in cellular energy metabolism. Research on these diseases contributes to uncovering their causes and providing potential targets for future treatments.

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.

Shelf Life

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