10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

ATP5E Antibody (C-Term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP21888b

Product Information

Application	WB, E
Primary Accession	P56381
Reactivity	Human
Host	Rabbit
Clonality	polyclonal
Isotype	Rabbit IgG
Clone Names	RB53868
Calculated MW	5780

Additional Information

Gene ID	514
Other Names	ATP synthase subunit epsilon, mitochondrial, ATPase subunit epsilon, ATP5E
Target/Specificity	This ATP5E antibody is generated from a rabbit immunized with a KLH conjugated synthetic peptide between 21-51 amino acids from human ATP5E.
Dilution	WB~~1:2000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	ATP5E Antibody (C-Term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	ATP5F1E (HGNC:838)
Function	Subunit epsilon, of the mitochondrial membrane ATP synthase complex (F(1)F(0) ATP synthase or Complex V) that 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 (PubMed:37244256). ATP synthase complex consist of a soluble F(1) head domain - the catalytic core - and a membrane F(1) domain - the membrane proton channel (PubMed:37244256). These two domains are linked by a central stalk rotating

inside the F(1) region and a stationary peripheral stalk (PubMed:37244256). During catalysis, ATP synthesis in the catalytic domain of F(1) is coupled via a rotary mechanism of the central stalk subunits to proton translocation (Probable). In vivo, can only synthesize ATP although its ATP hydrolase activity can be activated artificially in vitro (By similarity). May be essential for the assembly of F(1) and may play an important role in the incorporation of the hydrophobic subunit c into the F(1)-c oligomer rotor of the mitochondrial ATP synthase complex (PubMed:20026007).

Cellular Location Mitochondrion. Mitochondrion inner membrane.

Tissue Location Ubiquitous.

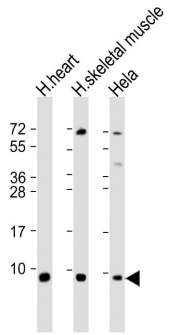
Background

Mitochondrial membrane ATP synthase (F(1)F(0) 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, F(1) - containing the extramembraneous catalytic core, and F(0) - containing the membrane proton channel, linked together by a central stalk and a peripheral stalk. During catalysis, ATP synthesis in the catalytic domain of F(1) is coupled via a rotary mechanism of the central stalk subunits to proton translocation. Part of the complex F(1) domain and of the central stalk which is part of the complex rotary element. Rotation of the central stalk against the surrounding alpha(3)beta(3) subunits leads to hydrolysis of ATP in three separate catalytic sites on the beta subunits (By similarity).

References

Tu Q.,et al.Biochem. J. 347:17-21(2000).
Hu R.-M.,et al.Proc. Natl. Acad. Sci. U.S.A. 97:9543-9548(2000).
Ota T.,et al.Nat. Genet. 36:40-45(2004).
Kalnine N.,et al.Submitted (MAY-2003) to the EMBL/GenBank/DDBJ databases.
Deloukas P.,et al.Nature 414:865-871(2001).

Images



All lanes : Anti-ATP5E Antibody (C-Term) at 1:2000 dilution Lane 1: human heart lysate Lane 2: human skeletal muscle lysate Lane 3: Hela whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 6 kDa Blocking/Dilution buffer: 5% NFDM/TBST.