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Rabbit Anti-ATP5E antibody

SL12546R

Product Name:	ATP5E
Chinese Name:	ATP5E蛋白抗体
Alias:	ATP 5E; ATP synthase epsilon chain mitochondrial; ATP synthase H+ transporting mitochondrial F1 complex epsilon subunit; ATP synthase subunit epsilon; ATP5E; ATP5E_HUMAN; ATPase subunit epsilon; ATPE; F(0)F(1) ATPase; H(+) transporting two sector ATPase; MGC104243; mitochondrial; Mitochondrial ATP synthase epsilon chain; Mitochondrial ATPase.
Organism Species:	Rabbit
Clonality:	Polyclonal
React Species:	Human,Pig,
Applications:	ELISA=1:500-1000 not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight:	6kDa
Cellular localization:	cytoplasmicThe cell membraneMitochondrion
Form:	Lyophilized or Liquid
Concentration:	1mg/ml
immunogen:	KLH conjugated synthetic peptide derived from human ATP5E:2-51/51
Lsotype:	IgG
Purification:	affinity purified by Protein A
Storage Buffer:	0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.
Storage:	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.
PubMed:	PubMed
Product Detail:	Mitochondrial ATP synthases (ATPases) transduce the energy contained in membrane electrochemical proton gradients into the energy required for synthesis of high-energy phosphate bonds. ATPases contain two linked complexes: F1, the hydrophilic catalytic core; and F0, the membrane-embedded protein channel. F1 consists of three Alpha

chains and three Beta chains, which are weakly homologous, as well as one Gamma chain, one Delta chain and one e chain. F0 consists of three subunits: a, b and c. The e chain of F1 contains 50 amino acids and is the smallest of the five ATPase F1 chains. Mitochondrial ATPase e chain (ATP5E) localizes to the mitochondria and catalyzes ATP synthesis.

Function:
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.

Subunit:
F-type ATPases have 2 components, CF(1) - the catalytic core - and CF(0) - the membrane proton channel. CF(1) has five subunits: alpha(3), beta(3), gamma(1), delta(1), epsilon(1). CF(0) seems to have nine subunits: a, b, c, d, e, f, g, F6 and 8 (or A6L). Component of an ATP synthase complex composed of ATP5F1, ATP5G1, ATP5E, ATP5H, ATP5I, ATP5J, ATP5J2, MT-ATP6, MT-ATP8, ATP5A1, ATP5B, ATP5D, ATP5C1, ATP5O, ATP5L, USMG5 and MP68 (By similarity).

Subcellular Location:
Mitochondrion. Mitochondrion inner membrane.

Tissue Specificity:
Ubiquitous.

DISEASE:
Defects in ATP5E are the cause of mitochondrial complex V deficiency nuclear type 3 (MC5DN3) [MIM:614053]. MC5DN3 is a mitochondrial disorder with heterogeneous clinical manifestations including dysmorphic features, psychomotor retardation, hypotonia, growth retardation, cardiomyopathy, enlarged liver, hypoplastic kidneys and elevated lactate levels in urine, plasma and cerebrospinal fluid.

Similarity:
Belongs to the eukaryotic ATPase epsilon family.

SWISS:
P56381

	Gene ID: 514 **Database links:** **Important Note:** This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.