

COQ7 Polyclonal Antibody

Purified Rabbit Polyclonal Antibody (Pab)

Catalog # AP55369

Product Information

Application	IHC-P, IHC-F, IF, ICC, E
Primary Accession	Q99807
Reactivity	Rat, Dog
Host	Rabbit
Clonality	Polyclonal
Calculated MW	24277

Additional Information

Gene ID	10229
Other Names	5-demethoxyubiquinone hydroxylase, mitochondrial {ECO:0000255 HAMAP-Rule:MF_03194}, DMQ hydroxylase {ECO:0000255 HAMAP-Rule:MF_03194}, 1.14.99.60 {ECO:0000255 HAMAP-Rule:MF_03194}, Timing protein clk-1 homolog {ECO:0000255 HAMAP-Rule:MF_03194}, Ubiquinone biosynthesis monooxygenase COQ7 {ECO:0000255 HAMAP-Rule:MF_03194}, COQ7 {ECO:0000255 HAMAP-Rule:MF_03194}
Dilution	IHC-P=1:100-500,IHC-F=1:100-500,ICC=1:100-500,IF=1:100-500,ELISA=1:5000-10000
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. 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.

Protein Information

Name	COQ7 {ECO:0000255 HAMAP-Rule:MF_03194, ECO:0000312 HGNC:HGNC:2244}
Function	Catalyzes the hydroxylation of the 5-methoxy-2-methyl-3-(all-trans-polyprenyl)benzoquinone at the C6 position and participates in the biosynthesis of ubiquinone (Probable). Catalyzes the reaction through a substrate-mediated reduction pathway, whereby NADH shuttles electrons to 5-methoxy-2-methyl-3-(all-trans-decaprenyl)benzoquinone, which then transfers the electrons to the two Fe(3+) centers (PubMed: 23445365). The binding of 5-methoxy-2-methyl-3-(all-trans- polyprenyl)benzoquinone (DMQn) mediates reduction of the diiron center by nicotinamide adenine dinucleotide (NADH) and initiates oxygen activation for subsequent DMQ hydroxylation (PubMed: 23445365). The physiological substrates are 5-methoxy-2-methyl-3-(all-trans- nonaprenyl)benzoquinone (DMQ(9)) and

5-methoxy-2-methyl-3-(all-trans- decaprenyl)benzoquinone (DMQ(10)), however in vitro the enzyme does not have any specificity concerning the length of the polyprenyl tail, and accepts tails of various lengths with similar efficiency (PubMed:[23445365](#), PubMed:[28409910](#)). Also has a structural role in the COQ enzyme complex, stabilizing other COQ polypeptides. Involved in lifespan determination in a ubiquinone-independent manner (By similarity). Plays a role in modulating mitochondrial stress responses, acting in the nucleus, perhaps via regulating gene expression, independent of its characterized mitochondrial function in ubiquinone biosynthesis (PubMed:[25961505](#)).

Cellular Location

Mitochondrion inner membrane {ECO:0000255 | HAMAP- Rule:MF_03194}; Peripheral membrane protein {ECO:0000255 | HAMAP- Rule:MF_03194}; Matrix side {ECO:0000255 | HAMAP-Rule:MF_03194} Mitochondrion. Nucleus. Chromosome

Tissue Location

Expressed dominantly in heart and skeletal muscle.

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