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COQ3 Polyclonal Antibody
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP55368

Specification

COQ3 Polyclonal Antibody - Product Information

Application	**IHC-P, IHC-F, IF, ICC, E**
Primary Accession	Q9NZJ6
Reactivity	**Rat, Pig, Dog, Bovine**
Host	**Rabbit**
Clonality	**Polyclonal**
Calculated MW	**41 KDa**
Physical State	**Liquid**
Immunogen	**KLH conjugated synthetic peptide derived from human COQ3**
Epitope Specificity	**151-250/369**
Isotype	**IgG**

Purity
affinity purified by Protein A

Buffer	**0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.**
SUBCELLULAR LOCATION	**Mitochondrion matrix.**
SIMILARITY	**Belongs to the methyltransferase superfamily. UbiG/COQ3 family.**
Important Note	**This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.**

Background Descriptions
Ubiquinone, also known as coenzyme Q, or Q, is a critical component of the electron transport pathways of both eukaryotes and prokaryotes (Jonassen and Clarke, 2000 [PubMed 10777520]). This lipid consists of a hydrophobic isoprenoid tail and a quinone head group. The tail varies in length depending on the organism, but its purpose is to anchor coenzyme Q to the membrane. The quinone head group is responsible for the activity of coenzyme Q in the respiratory chain. The S. cerevisiae COQ3 gene encodes an O-methyltransferase required for 2 steps in the biosynthetic pathway of coenzyme Q. This enzyme methylates an early coenzyme Q intermediate, 3,4-dihydroxy-5-polyprenylbenzoic acid, as well as the final intermediate in the pathway, converting demethyl-ubiquinone to coenzyme Q. The COQ3 gene product is also capable of methylating the distinct prokaryotic early intermediate 2-hydroxy-6-polyprenyl phenol.[supplied by OMIM, Mar 2008]

COQ3 Polyclonal Antibody - Additional Information

Gene ID 51805

Other Names
Ubiquinone biosynthesis O-methyltransferase, mitochondrial {ECO:0000255|HAMAP-Rule:MF_03190}, 3-demethylubiquinol 3-O-methyltransferase {ECO:0000255|HAMAP-Rule:MF_03190}, 2.1.1.64 {ECO:0000255|HAMAP-Rule:MF_03190},

Polyprenyldihydroxybenzoate methyltransferase {ECO:0000255|HAMAP-Rule:MF_03190}, 2.1.1.114 {ECO:0000255|HAMAP-Rule:MF_03190}, COQ3 {ECO:0000255|HAMAP-Rule:MF_03190}

Dilution
IHC-P~~N/A<br \>IHC-F~~N/A<br \>IF~~1:50~200<br \>ICC~~N/A<br \>E~~N/A

Format
0.01M TBS(pH7.4), 0.09% (W/V) sodium azide and 50% Glyce

Storage
Store at -20 ℃ 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 ℃.

COQ3 Polyclonal Antibody - Protein Information

Name COQ3 {ECO:0000255|HAMAP-Rule:MF_03190, ECO:0000303|PubMed:38425362}

Function
O-methyltransferase required for two non-consecutive steps during ubiquinone biosynthesis (By similarity) (PubMed:10777520, PubMed:38425362). Catalyzes the 2 O-methylation of 3,4-dihydroxy-5-(all-trans-decaprenyl)benzoic acid into 4-hydroxy-3-methoxy-5-(all- trans-decaprenyl)benzoic acid (By similarity) (PubMed:10777520, PubMed:38425362). Also catalyzes the last step of ubiquinone biosynthesis by mediating methylation of 3-demethylubiquinone into ubiquinone (By similarity) (PubMed:38425362). Also able to mediate the methylation of 3-demethylubiquinol-10 into ubiquinol-10 (By similarity) (PubMed:10777520).

Cellular Location
Mitochondrion inner membrane {ECO:0000255|HAMAP- Rule:MF_03190, ECO:0000269|PubMed:27499296}; Peripheral membrane protein {ECO:0000255|HAMAP-Rule:MF_03190}; Matrix side {ECO:0000255|HAMAP-Rule:MF_03190}

COQ3 Polyclonal Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

COQ3 Polyclonal Antibody - Images