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COQ3 Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP8765C

Specification

COQ3 Antibody (Center) - Product Information

Application	**FC, IHC-P, WB,E**
Primary Accession	Q9NZJ6
Other Accession	Q3T131
Reactivity	**Human**
Predicted	**Bovine**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Calculated MW	**41054**
Antigen Region	**172-201**

COQ3 Antibody (Center) - Additional Information

Gene ID 51805

Other Names
Hexaprenyldihydroxybenzoate methyltransferase, mitochondrial, 2-polyprenyl-6-hydroxyphenol methylase, 4-dihydroxy-5-hexaprenylbenzoate methyltransferase, DHHB methyltransferase, DHHB-MT, DHHB-MTase, 3-demethylubiquinone-10 3-methyltransferase, Dihydroxyhexaprenylbenzoate methyltransferase, COQ3

Target/Specificity
This COQ3 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 172-201 amino acids from the Central region of human COQ3.

Dilution
FC~~1:10~50
IHC-P~~1:50~100
WB~~1:1000
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
COQ3 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

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COQ3 Antibody (Center) - 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).

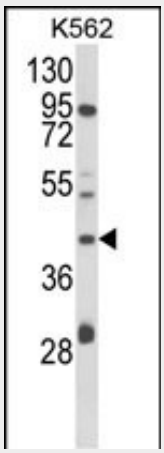
Cellular Location
Mitochondrion inner membrane {ECO:0000255|HAMAP- Rule:MF_03190, ECO:0000269|PubMed:27499296}; Peripheral membrane protein {ECO:0000255|HAMAP-Rule:MF_03190}; Matrix side {ECO:0000255|HAMAP-Rule:MF_03190}

COQ3 Antibody (Center) - 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 Antibody (Center) - Images



Western blot analysis of COQ3 Antibody (Center) (Cat. #AP8765c) in K562 cell line lysates (35ug/lane). COQ3 (arrow) was detected using the purified Pab.

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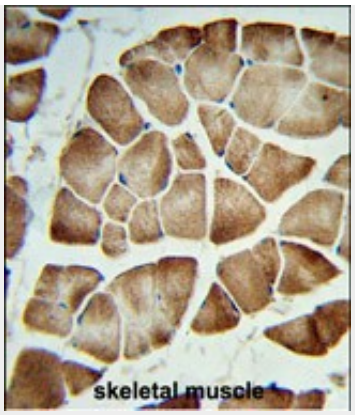
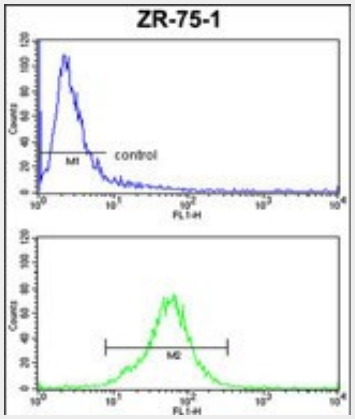


Formalin-fixed and paraffin-embedded human skeletal muscle reacted with COQ3 Antibody (Center), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.



COQ3 Antibody (Center) (Cat.#AP8765c) FC analysis of ZR-75-1 cells (bottom histogram) compared to a negative control cell (top histogram). FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

COQ3 Antibody (Center) - Background

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. COQ3 is 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 is also capable of methylating the distinct prokaryotic early intermediate 2-hydroxy-6-polyprenyl phenol.

COQ3 Antibody (Center) - References

Olsen,J.V., et.al., Cell 127 (3), 635-648 (2006)