

COQ4 (G-15): sc-83389

BACKGROUND

Coenzyme Q (COQ), also referred to as ubiquinone, is a fat-soluble component of the electron transport chain that participates in aerobic cellular respiration within mitochondria and is essential for ATP-dependent energy production. COQ consists of a hydrophobic isoprenoid tail, which anchors it to the membrane, and a quinone head group, which is responsible for the activity of COQ in the respiratory chain. COQ biosynthesis requires the formation of a multi-subunit enzyme complex, composed of COQ1 through COQ10, which is highly characterized in yeast. COQ4 is a 265 amino acid protein that is ubiquitously expressed with high levels in liver, lung and pancreas. In human, COQ4 protein has no known enzymatic function, but may function as a core component of multisubunit complex required for COQ biosynthesis.

REFERENCES

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2. Marbois, B., Gin, P., Faull, K.F., Poon, W.W., Lee, P.T., Strahan, J., Shepherd, J.N. and Clarke, C.F. 2005. COQ3 and COQ4 define a polypeptide complex in yeast mitochondria for the biosynthesis of coenzyme Q. *J. Biol. Chem.* 280: 20231-20238.
3. Zeviani, M. and Carelli, V. 2007. Mitochondrial disorders. *Curr. Opin. Neurol.* 20: 564-571.
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CHROMOSOMAL LOCATION

Genetic locus: COQ4 (human) mapping to 9q34.11; Coq4 (mouse) mapping to 2 B.

SOURCE

COQ4 (G-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of COQ4 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-83389 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

COQ4 (G-15) is recommended for detection of COQ4 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with other COQ family members.

COQ4 (G-15) is also recommended for detection of COQ4 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for COQ4 siRNA (h): sc-72975, COQ4 siRNA (m): sc-72976, COQ4 shRNA Plasmid (h): sc-72975-SH, COQ4 shRNA Plasmid (m): sc-72976-SH, COQ4 shRNA (h) Lentiviral Particles: sc-72975-V and COQ4 shRNA (m) Lentiviral Particles: sc-72976-V.

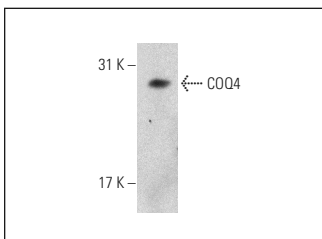
Molecular Weight of COQ4 isoforms: 30/27 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



COQ4 (G-15): sc-83389. Western blot analysis of COQ4 expression in Hep G2 whole cell lysate.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.