

COQ6 (D-12): sc-107505

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. Specifically, in yeast, COQ6 encodes a flavin-dependent monooxygenase essential for coenzyme Q biosynthesis. In human, COQ6 is a 468 amino acid protein whose function is not fully elucidated.

REFERENCES

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2. Hsieh, E.J., Dinoso, J.B. and Clarke, C.F. 2004. A tRNA(Trp) gene mediates the suppression of cbs2-223 previously attributed to ABC1/COQ8. *Biochem. Biophys. Res. Commun.* 317: 648-653.
3. Hsieh, E.J., Gin, P., Gulmezian, M., Tran, U.C., Saiki, R., Marbois, B.N. and Clarke, C.F. 2007. *Saccharomyces cerevisiae* COQ9 polypeptide is a subunit of the mitochondrial coenzyme Q biosynthetic complex. *Arch. Biochem. Biophys.* 463: 19-26.
4. Zeviani, M. and Carelli, V. 2007. Mitochondrial disorders. *Curr. Opin. Neurol.* 20: 564-571.
5. Lekli, I., Das, S., Das, S., Mukherjee, S., Bak, I., Juhasz, B., Bagchi, D., Trimurtulu, G., Krishnaraju, A.V., Sengupta, K., Tosaki, A. and Das, D.K. 2008. Coenzyme Q9 provides cardioprotection after converting into coenzyme Q10. *J. Agric. Food Chem.* 56: 5331-5337.
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CHROMOSOMAL LOCATION

Genetic locus: COQ6 (human) mapping to 14q24.3; Coq6 (mouse) mapping to 12 D1.

SOURCE

COQ6 (D-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of COQ6 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-107505 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

COQ6 (D-12) is recommended for detection of COQ6 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.

COQ6 (D-12) is also recommended for detection of COQ6 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for COQ6 siRNA (h): sc-92342, COQ6 siRNA (m): sc-142514, COQ6 shRNA Plasmid (h): sc-92342-SH, COQ6 shRNA Plasmid (m): sc-142514-SH, COQ6 shRNA (h) Lentiviral Particles: sc-92342-V and COQ6 shRNA (m) Lentiviral Particles: sc-142514-V.

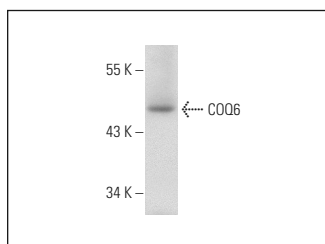
Molecular Weight of COQ6: 51 kDa.

Positive Controls: mouse brain extract: sc-2253.

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



COQ6 (D-12): sc-107505. Western blot analysis of COQ6 expression in mouse brain tissue extract.

STORAGE

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



Try **COQ6 (H-1): sc-393932**, our highly recommended monoclonal alternative to COQ6 (D-12).