

# COQ3 (C-13): sc-83383



The Power to Question

## 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. COQ3 (coenzyme Q3 homolog), also known as hexaprenyldihydroxybenzoate methyltransferase or DHHB methyltransferase (DHHB-MT), mitochondrial is a 369 amino acid protein that localizes to the mitochondrial matrix. COQ3 is a methyltransferase required for two steps in the biosynthesis of coenzyme Q.

## REFERENCES

- Jonassen, T., et al. 2000. Isolation and functional expression of human COQ3, a gene encoding a methyltransferase required for ubiquinone biosynthesis. *J. Biol. Chem.* 275: 12381-12387.
- Wiemann, S., et al. 2001. Toward a catalog of human genes and proteins: sequencing and analysis of 500 novel complete protein coding human cDNAs. *Genome Res.* 11: 422-435.
- Online Mendelian Inheritance in Man, OMIM™. 2006. Johns Hopkins University, Baltimore, MD. MIM Number: 605196. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- Hsieh, E.J., et al. 2007. *Saccharomyces cerevisiae* Coq9 polypeptide is a subunit of the mitochondrial coenzyme Q biosynthetic complex. *Arch. Biochem. Biophys.* 463: 19-26.
- Franke, B., et al. 2009. An association study of 45 folate-related genes in spina bifida: Involvement of cubilin (CUBN) and tRNA aspartic acid methyltransferase 1 (TRDMT1). *Birth Defects Res. Part A Clin. Mol. Teratol.* 85: 216-226.

## CHROMOSOMAL LOCATION

Genetic locus: COQ3 (human) mapping to 6q16.2; Coq3 (mouse) mapping to 4 A3.

## SOURCE

COQ3 (C-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of COQ3 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-83383 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

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

## APPLICATIONS

COQ3 (C-13) is recommended for detection of COQ3 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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.

COQ3 (C-13) is also recommended for detection of COQ3 in additional species, including bovine.

Suitable for use as control antibody for COQ3 siRNA (h): sc-72973, COQ3 siRNA (m): sc-72974, COQ3 shRNA Plasmid (h): sc-72973-SH, COQ3 shRNA Plasmid (m): sc-72974-SH, COQ3 shRNA (h) Lentiviral Particles: sc-72973-V and COQ3 shRNA (m) Lentiviral Particles: sc-72974-V.

Molecular Weight of COQ3: 41 kDa.

## 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) 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.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.