

COQ3 (h2): 293 Lysate: sc-158390

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 hexaprenyldi-hydroxybenzoate 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. and Clarke, C.F. 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. A Clin. Mol. Teratol.* 85: 216-226.

CHROMOSOMAL LOCATION

Genetic locus: COQ3 (human) mapping to 6q16.2.

PRODUCT

COQ3 (h2): 293 Lysate represents a lysate of human COQ3 transfected 293 cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

APPLICATIONS

COQ3 (h2): 293 Lysate is suitable as a Western Blotting positive control for human reactive COQ3 antibodies. Recommended use: 10-20 µl per lane.

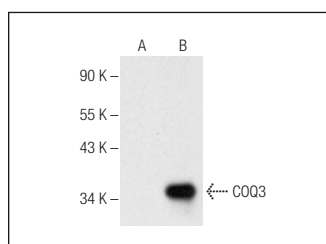
Control 293 Lysate: sc-110760 is available as a Western Blotting negative control lysate derived from non-transfected 293 cells.

COQ3 (F-8): sc-376774 is recommended as a positive control antibody for Western Blot analysis of enhanced human COQ3 expression in COQ3 transfected 293 cells (starting dilution 1:100, dilution range 1:100-1:1,000).

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker[™] Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



COQ3 (F-8): sc-376774. Western blot analysis of COQ3 expression in non-transfected: sc-110760 (A) and human COQ3 transfected: sc-158390 (B) 293 whole cell lysates.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.