QP-C (m): 293T Lysate: sc-125875



The Power to Question

BACKGROUND

Cytochrome c is a well characterized, mobile electron transport protein that is essential to energy conversion in all aerobic organisms. Cytochrome b associates with cytochrome c subunit 1 and the Rieske protein to form complex III, also designated cytochrome bc1 complex, which is involved in cellular respiration. QP-C, also known as QCR8, QPC, UQCRQ (ubiquinol-cytochrome c reductase, complex III subunit VII, 9.5kDa) or cytochrome bc1 complex subunit 8, is a 82 amino acid mitochondrion inner membrane protein that belongs to the UQCRQ/QCR8 family. QP-C is a component of the UQCRC (ubiquinol-cytochrome-c reductase complex core) complex, which is part of the mitochondrial respiratory chain. Mutations in QP-C are due to mitochondrial complex III deficiency and are characterized by severe psychomotor retardation and extrapyramidal signs.

REFERENCES

- Duncan, A.M., Ozawa, T., Suzuki, H. and Rozen, R. 1993. Assignment of the gene for the core protein II (UQCRC2) subunit of the mitochondrial cytochrome bc1 complex to human chromosome 16p12. Genomics 18: 455-456.
- Hoffman, G.G., Lee, S., Christiano, A.M., Chung-Honet, L.C., Cheng, W., Katchman, S., Uitto, J. and Greenspan, D.S. 1993. Complete coding sequence, intron/exon organization, and chromosomal location of the gene for the core I protein of human ubiquinol-cytochrome c reductase. J. Biol. Chem. 268: 21113-21119.
- Valnot, I., Kassis, J., Chretien, D., de Lonlay, P., Parfait, B., Munnich, A., Kachaner, J., Rustin, P. and Rötig, A. 1999. A mitochondrial cytochrome b mutation but no mutations of nuclearly encoded subunits in Ubiquinol cytochrome c reductase (complex III) deficiency. Hum. Genet. 104: 460-466.
- 4. Borisov, V.B. 2002. Defects in mitochondrial respiratory complexes III and IV, and human pathologies. Mol. Aspects Med. 23: 385-412.
- Wen, J.J. and Garg, N. 2004. Oxidative modification of mitochondrial respiratory complexes in response to the stress of *Trypanosoma cruzi* infection. Free Radic. Biol. Med. 37: 2072-2081.
- Borisov, V.B. 2004. Mutations in respiratory chain complexes and human diseases. Ital. J. Biochem. 53: 34-40.
- Sadakata, T. and Furuichi, T. 2006. Identification and mRNA expression of Ogdh, QP-C, and two predicted genes in the postnatal mouse brain. Neurosci. Lett. 405: 217-222.
- Jia, H.L., Ye, Q.H., Qin, L.X., Budhu, A., Forgues, M., Chen, Y., Liu, Y.K., Sun, H.C., Wang, L., Lu, H.Z., Shen, F., Tang, Z.Y. and Wang, X.W. 2007. Gene expression profiling reveals potential biomarkers of human hepatocellular carcinoma. Clin. Cancer Res. 13: 1133-1139.
- Barel, O., Shorer, Z., Flusser, H., Ofir, R., Narkis, G., Finer, G., Shalev, H., Nasasra, A., Saada, A. and Birk, O.S. 2008. Mitochondrial complex III deficiency associated with a homozygous mutation in UQCRQ. Am. J. Hum. Genet. 82: 1211-1216.

CHROMOSOMAL LOCATION

Genetic locus: Uqcrq (mouse) mapping to 11 B1.3.

PRODUCT

QP-C (m): 293T Lysate represents a lysate of mouse QP-C transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

QP-C (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive QP-C antibodies. Recommended use: 10-20 μ l per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

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.

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.

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