



# CABC1 (721G2B): sc-517656

## BACKGROUND

CABC1 (chaperone activity of bc1 complex-like), also known as COQ8 or ADCK3 (aarF domain-containing protein kinase 3) is a 647 amino acid mitochondrial protein that belongs to the protein kinase superfamily. Ubiquitously expressed with higher expression in heart and skeletal muscle, CABC1 is thought to function as a chaperone in the proper assembly of protein complexes found in the respiratory chain. CABC1 expression is induced both in response to DNA damage and by the tumor suppressor p53. When CABC1 expression is inhibited, p53-induced apoptosis is partially suppressed, suggesting a possible role for CABC1 in tumor suppression. Mutations in the gene encoding CABC1 may be implicated in ubiquinone deficiency which can lead to cerebellar ataxia and seizures. Four isoforms of CABC1 exist due to alternative splicing events.

## REFERENCES

1. Iizumi, M., Arakawa, H., Mori, T., Ando, A. and Nakamura, Y. 2002. Isolation of a novel gene, CABC1, encoding a mitochondrial protein that is highly homologous to yeast activity of bc1 complex. *Cancer Res.* 62: 1246-1250.
2. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 606980. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
3. Wan, D., Gong, Y., Qin, W., Zhang, P., Li, J., Wei, L., Zhou, X., Li, H., Qiu, X., Zhong, F., He, L., Yu, J., Yao, G., Jiang, H., Qian, L., Yu, Y., Shu, H., Chen, X., Xu, H., Guo, M., Pan, Z., Chen, Y., Ge, C., Yang, S. and Gu, J. 2004. Large-scale cDNA transfection screening for genes related to cancer development and progression. *Proc. Natl. Acad. Sci. USA* 101: 15724-15729.
4. Mollet, J., Delahodde, A., Serre, V., Chretien, D., Schlemmer, D., Lomès, A., Boddaert, N., Desguerre, I., de Lonlay, P., de Baulny, H.O., Munnich, A. and Rötig, A. 2008. CABC1 gene mutations cause ubiquinone deficiency with cerebellar ataxia and seizures. *Am. J. Hum. Genet.* 82: 623-630.
5. Lagier-Tourenne, C., Tazir, M., López, L.C., Quinzii, C.M., Assoum, M., Drouot, N., Busso, C., Makri, S., Ali-Pacha, L., Benhassine, T., Anheim, M., Lynch, D.R., Thibault, C., Plewniak, F., Bianchetti, L., et al. 2008. ADCK3, an ancestral kinase, is mutated in a form of recessive ataxia associated with coenzyme Q10 deficiency. *Am. J. Hum. Genet.* 82: 661-672.

## CHROMOSOMAL LOCATION

Genetic locus: COQ8A (human) mapping to 1q42.13.

## SOURCE

CABC1 (721G2B) is a mouse monoclonal antibody raised against recombinant CABC1 of human origin.

## PRODUCT

Each vial contains 100 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## RESEARCH USE

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

## APPLICATIONS

CABC1 (721G2B) is recommended for detection of CABC1 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for CABC1 siRNA (h): sc-78990, CABC1 shRNA Plasmid (h): sc-78990-SH and CABC1 shRNA (h) Lentiviral Particles: sc-78990-V.

Molecular Weight of CABC1: 72 kDa.

## 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. 2) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## STORAGE

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

## PROTOCOLS

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