SANTA CRUZ BIOTECHNOLOGY, INC.

cytochrome c1 (E-18): sc-87670

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The Power to Question

BACKGROUND

Cytochrome c1 is a component of the ubiquinol-cytochrome c reductase complex, which is a respiratory chain that generates an electrochemical potential, coupled to ATP synthesis. Specifically, cytochrome c transfers electrons from the cytochrome bc1 complex to cytochrome c oxidase by transiently binding to the complex. The bc1 complex contains 11 subunits: 3 respiratory subunits (cytochrome b, cytochrome c1 and Rieske/UQCRFS1), 2 core proteins (UQCRC1/QCR1 and UQCRC2/QCR2) and 6 low-molecular weight proteins (UQCRH/QCR6, UQCRB/QCR7, UQCRQ/QCR8, UQCR10/QCR9, UQCR11/QCR10 and a cleavage product of Rieske/UQCRFS1). Cytochrome c1 binds one heme per subunit as a result of a mutation-induced collapse of the di-heme cytochrome structure. The cytochrome c1 gene is thought to be regulated by E2F and Sp1 transcription factors.

REFERENCES

1. Nishikimi, M., et al. 1987. Isolation of a cDNA clone for human cytochrome c1 from a λ gt11 expression library. Biochem. Biophys. Res. Commun. 145: 34-39.
2. Suzuki, H., et al. 1990. Common protein-binding sites in the 5'-flanking regions of human genes for cytochrome c1 and ubiquinone-binding protein. J. Biol. Chem. 265: 8159-8163.
3. Duncan, A.M., et al. 1994. Assignment of the gene for the cytochrome c1 subunit of the mitochondrial cytochrome bc1 complex (CYC1) to human chromosome 8q24.3. Genomics 19: 400-401.
4. Li, R., Luciakova, K. and Nelson, B.D. 1996. Expression of the human cytochrome c1 gene is controlled through multiple Sp1-binding sites and an initiator region. Eur. J. Biochem. 241: 649-656.
5. Zhang, Z., et al. 1998. Electron transfer by domain movement in cytochrome bc1. Nature 392: 677-684.
6. Luciakova, K., et al. 2000. Activity of the human cytochrome c1 promoter is modulated by E2F. Biochem. J. 351: 251-256.

CHROMOSOMAL LOCATION

Genetic locus: CYC1 (human) mapping to 8q24.3; Cyc1 (mouse) mapping to 15 D3.

SOURCE

cytochrome c1 (E-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of cytochrome c1 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-87670 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

cytochrome c1 (E-18) is recommended for detection of cytochrome c1 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).

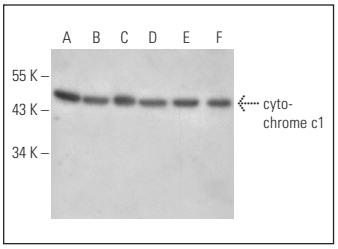
cytochrome c1 (E-18) is also recommended for detection of cytochrome c1 in additional species, including canine, bovine, porcine and avian.

Suitable for use as control antibody for cytochrome c1 siRNA (h): sc-77573, cytochrome c1 siRNA (m): sc-142761, cytochrome c1 shRNA Plasmid (h): sc-77573-SH, cytochrome c1 shRNA Plasmid (m): sc-142761-SH, cytochrome c1 shRNA (h) Lentiviral Particles: sc-77573-V and cytochrome c1 shRNA (m) Lentiviral Particles: sc-142761-V.

Molecular Weight of cytochrome c1: 35 kDa.

Positive Controls: A-431 whole cell lysate: sc-2201, RT-4 whole cell lysate: sc-364257 or mouse brain extract: sc-2253.

DATA



cytochrome c1 (E-18): sc-87670. Western blot analysis of cytochrome c1 expression in HUV-EC-C (**A**), A-431 (**B**), RT-4 (**C**), U-251-MG (**D**) and NCI-H1299 (**E**) whole cell lysates and mouse brain tissue extract (**F**).

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 or our catalog for detailed protocols and support products.

MONOS Satisfaction Guaranteed

Try **cytochrome c1 (A-5): sc-514435** or **cytochrome c1 (D-10): sc-514443**, our highly recommended monoclonal alternatives to cytochrome c1 (E-18).