

COX7c (S-18): sc-55711

BACKGROUND

The cytochrome c oxidase (COX) family of proteins function as the final electron donor in the respiratory chain to drive a proton gradient across the inner mitochondrial membrane, ultimately resulting in the production of water. The mammalian COX apoenzyme is a dimer, with each monomer consisting of 13 subunits, some of which are mitochondrial and some of which are nuclear. The COX7c protein is a nuclear-encoded subunit of the COX complex that is transported to the mitochondria where it functions with the other COX proteins in the last step in cellular respiration. Like most of the other cytochrome subunits, COX7c is aerobic and its expression is increased when oxygen levels are high.

REFERENCES

- Seelan, R.S. and Grossman, L.I. 1997. Structural organization and promoter analysis of the bovine cytochrome c oxidase subunit VIIc gene. A functional role for YY1. *J. Biol. Chem.* 272: 10175-10181.
- Burke, P.V., Raitt, D.C., Allen, L.A., Kellogg, E.A. and Poyton, R.O. 1997. Effects of oxygen concentration on the expression of cytochrome c and cytochrome c oxidase genes in yeast. *J. Biol. Chem.* 272: 14705-14712.
- Ragno, S., Estrada-Garcia, I., Butler, R. and Colston, M.J. 1998. Regulation of macrophage gene expression by *Mycobacterium tuberculosis*: down-regulation of mitochondrial cytochrome c oxidase. *Infect. Immun.* 66: 3952-3958.
- Schmidt, T.R., Goodman, M. and Grossman, L.I. 2002. Amino acid replacement is rapid in primates for the mature polypeptides of COX subunits, but not for their targeting presequences. *Gene* 286: 13-19.
- Yu, L., Lei, L.S. and Wu, S.G. 2003. Cyclosporin A inhibits Insulin release and down-regulates gene expressions of mitochondrial oxidative phosphorylation enzymes in NIT-cells. *Di Yi Jun Yi Da Xue Xue Bao* 23: 833-836.

CHROMOSOMAL LOCATION

Genetic locus: COX7C (human) mapping to 5q14.3; Cox7c (mouse) mapping to 13 C3.

SOURCE

COX7c (S-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of COX7c 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-55711 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

COX7c (S-18) is recommended for detection of cytochrome c oxidase polypeptide VIIc of human, mouse and, to a lesser extent, rat 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).

COX7c (S-18) is also recommended for detection of cytochrome c oxidase polypeptide VIIc in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for COX7c siRNA (h): sc-62152, COX7c siRNA (m): sc-62153, COX7c shRNA Plasmid (h): sc-62152-SH, COX7c shRNA Plasmid (m): sc-62153-SH, COX7c shRNA (h) Lentiviral Particles: sc-62152-V and COX7c shRNA (m) Lentiviral Particles: sc-62153-V.

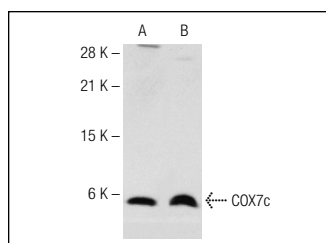
Molecular Weight of COX7c: 7 kDa.

Positive Controls: mouse heart extract: sc-2254, A-673 cell lysate: sc-2414 or Hep G2 cell lysate: sc-2227.

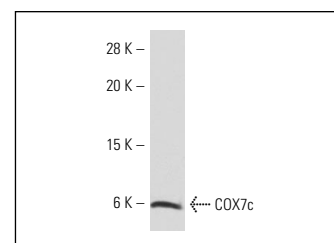
RECOMMENDED SECONDARY REAGENTS

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



COX7c (S-18): sc-55711. Western blot analysis of COX7c expression in A-673 (A) and Hep G2 (B) whole cell lysates.



COX7c (S-18): sc-55711. Western blot analysis of COX7c expression in mouse heart tissue extract.

RESEARCH USE

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

PROTOCOLS

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