SANTA CRUZ BIOTECHNOLOGY, INC.

COX4 (H-84): sc-292052

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Cytochrome c oxidase (COX) functions as the terminal oxidase of the respiratory chain that uses cytochrome c as an electron donor to drive a proton gradient across the inner mitochondrial membrane. The mammalian COX apoenzyme is a heteromer consisting of three mitochondrial encoded catalytic subunits and several nuclear gene encoded structural subunits. COX contains two iron-coordination sites and two copper-coordination sites. Cytochrome c oxidase IV (COX4) is a nuclear-encoded subunit of COX that may play a role in regulating COX activity. COX4 is expressed ubiquitously in adult human tissue with the strongest levels of expression in the pancreas and moderate expression levels in heart, skeletal muscle and placenta.

REFERENCES

1. Steffens, G.J., et al. 1979. Studies on cytochrome c oxidase, IV[1-3]. Prim subunit II. Hoppe-Seyler's Z. Physiol. Chem. 360: 613-619.
2. Brown, W.M., et al. 1982. Mitochondrial DNA sequences of primates: tempo and mode of evolution. J. Mol. Evol. 18: 225-239.
3. Zeviani, M., et al. 1987. Isolation of a cDNA clone encoding subunit IV of human cytochrome c oxidase. Gene 55: 205-217.

CHROMOSOMAL LOCATION

Genetic locus: COX4I1 (human) mapping to 16q24.1; Cox4i1 (mouse) mapping to 8 E1.

SOURCE

COX4 (H-84) is a rabbit polyclonal antibody raised against amino acids 86-169 mapping at the C-terminus of COX4 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.

APPLICATIONS

COX4 (H-84) is recommended for detection of COX4 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with other COX family members.

Suitable for use as control antibody for COX4 siRNA (h): sc-72074, COX4 siRNA (m): sc-72075, COX4 shRNA Plasmid (h): sc-72074-SH, COX4 shRNA Plasmid (m): sc-72075-SH, COX4 shRNA (h) Lentiviral Particles: sc-72074-V and COX4 shRNA (m) Lentiviral Particles: sc-72075-V.

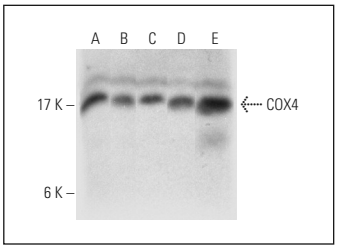
Molecular Weight of COX4: 17 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, Hep G2 cell lysate: sc-2227 or MCF7 whole cell lysate: sc-2206.

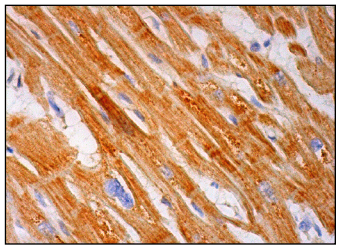
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



COX4 (H-84): sc-292052. Western blot analysis of COX4 expression in Hep G2 (**A**), HeLa (**B**), MCF7 (**C**) and A-375 (**D**) whole cell lysates and human skeletal muscle tissue extract (**E**).



COX4 (H-84): sc-292052. Immunoperoxidase staining of formalin fixed, paraffin-embedded human heart muscle tissue showing cytoplasmic staining of myocytes.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. 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 or our catalog for detailed protocols and support products.

MONOS Satisfaction Guaranteed

Try **COX4 (F-8): sc-376731**, our highly recommended monoclonal alternative to COX4 (H-84). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **COX4 (F-8): sc-376731**.