SANTA CRUZ BIOTECHNOLOGY, INC.

COX5b (H-95): sc-292262

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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. Found in the inner mitochondrial membrane, COX5 is the heme A-containing chain of the oxidase family that converts one molecule of oxygen and four molecules of hydrogen to two molecules of water. Two isoforms of COX5 exist, COX5a and COX5b. When oxygen levels within the cell are high, transcription of COX5a (the aerobic isoform) is upregulated as the rate of cellular respiration increases. Conversely, when oxygen levels are low, COX5b (the hypoxic isoform) transcription increases and functions to maximize the turnover rate of the COX apoenzyme.

CHROMOSOMAL LOCATION

Genetic locus: COX5B (human) mapping to 2q11.2; Cox5b (mouse) mapping to 1 B.

SOURCE

COX5b (H-95) is a rabbit polyclonal antibody raised against amino acids 35-129 mapping at the C-terminus of COX5b 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.

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.

APPLICATIONS

COX5b (H-95) is recommended for detection of COX5b 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).

COX5b (H-95) is also recommended for detection of COX5b in additional species, including bovine.

Suitable for use as control antibody for COX5b siRNA (h): sc-72982, COX5b siRNA (m): sc-72983, COX5b shRNA Plasmid (h): sc-72982-SH, COX5b shRNA Plasmid (m): sc-72983-SH, COX5b shRNA (h) Lentiviral Particles: sc-72982-V and COX5b shRNA (m) Lentiviral Particles: sc-72983-V.

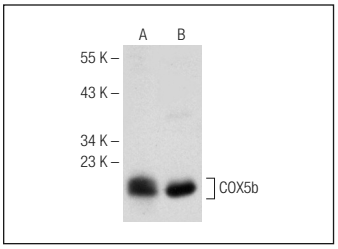
Molecular Weight of COX5b: 14 kDa.

Positive Controls: human heart extract: sc-363763 or Hep G2 cell lysate: sc-2227.

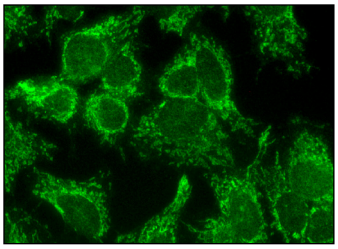
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use 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.

DATA



COX5b (H-95): sc-292262. Western blot analysis of COX5b expression in Hep G2 whole cell lysate (**A**) and human heart tissue extract (**B**).



COX5b (H-95): sc-292262. Immunofluorescence staining of formalin-fixed Hep G2 cells showing mitochondrial localization.

PROTOCOLS

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

MONOS Satisfaction Guaranteed

Try **COX5b (C-5): sc-374416** or **COX5b (B-2): sc-374417**, our highly recommended monoclonal alternatives to COX5b (H-95).