SANTA CRUZ BIOTECHNOLOGY, INC.

COX7a2/3 (H-56): sc-98477

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. COX7a2 (cytochrome c oxidase subunit VIIa polypeptide 2), also known as COX7AL or COX7AL1, is an 83 amino acid protein that localizes to the inner mitochondrial membrane and exists as a component of the COX complex, playing an important role in electron transport. Like COX7a2, COX7a3 (also known as COX7AP2 or COX7AL2) is a mitochondrial membrane protein that functions in conjunction with other COX proteins in the final steps of the respiratory chain.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: COX7A2 (human) mapping to 6q14.1, COX7AP2 (human) mapping to 4p16.3; Cox7a2 (mouse) mapping to 9 E1.

SOURCE

COX7a2/3 (H-56) is a rabbit polyclonal antibody raised against amino acids 28-83 mapping at the C-terminus of COX7a2 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

COX7a2/3 (H-56) is recommended for detection of COX7a2 of human and, to a lesser extent, mouse and rat origin, and COX7a3 of 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).

COX7a2/3 (H-56) is also recommended for detection of COX7a2 and COX7a3 in additional species, including equine, canine and bovine.

Molecular Weight of COX7a2: 9 kDa.

Molecular Weight of COX7a3: 12 kDa.

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.

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.