SANTA CRUZ BIOTECHNOLOGY, INC.

COX2 (K-20): sc-23984

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Cytochrome c oxidase subunit II (COX2), also designated COII, MTCO2 or oxidative phosphorylation (OxPhos) complex IV, subunit II, is one of three mitochondrial DNA (mtDNA) encoded subunits (MTCO1-3) of respiratory complex IV. Cytochrome c oxidase is a hetero-oligomeric enzyme composed of 13 subunits localized to the mitochondrial inner membrane and is the terminal enzyme complex of the electron transport chain. Complex IV catalyzes the reduction of molecular oxygen to water. The energy released is used to transport protons across the mitochondrial inner membrane. The resulting electrochemical gradient is necessary for the synthesis of ATP. Complex IV contains 13 polypeptides; COX1, COX2 and COX3 (MTCO1-3) make up the catalytic core and are encoded by mtDNA while subunits IV, Va, Vb, VIa, VIb, VIc, VIIa, VIIb, VIIc and VIII are nuclear-encoded. Defects in COX2 are associated with tumor formation.

CHROMOSONAL LOCATION

Genetic locus: COX2 (human) mapping to MT; COX2 (mouse) mapping to MT.

SOURCE

COX2 (K-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of COX2 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-23984 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as agarose conjugate for immunoprecipitation, sc-23984 AC, 500 µg/0.25 ml agarose in 1 ml.

APPLICATIONS

COX2 (K-20) is recommended for detection of cytochrome c oxidase II 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).

COX2 (K-20) is also recommended for detection of cytochrome c oxidase II in additional species, including equine, canine, porcine and avian.

Molecular Weight of COX2: 21 kDa.

Positive Controls: human heart extract: sc-363763.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

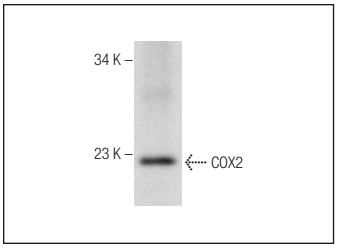
PROTOCOLS

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

RESEARCH USE

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

DATA



COX2 (K-20): sc-23984. Western blot analysis of COX2 expression in human heart tissue extract.

SELECT PRODUCT CITATIONS

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4. Qi, Z., et al. 2011. Exercise training attenuates oxidative stress and decreases p53 protein content in skeletal muscle of type 2 diabetic Goto-Kakizaki rats. Free Radic. Biol. Med. 50: 794-800.
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