

COX5a (C-19): sc-55708

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, COX5a, one of two subunits of the COX5 protein, 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. When oxygen levels within the cell are high, transcription of COX5a, the aerobic subunit of the COX5 protein, is upregulated as the rate of cellular respiration increases. Conversely, when oxygen levels are low, COX5a transcription decreases as the cell works to conserve oxygen by slowing the creation of water.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: COX5A (human) mapping to 15q24.2; Cox5a (mouse) mapping to 9 B.

SOURCE

COX5a (C-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of COX5a 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-55708 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

COX5a (C-19) is recommended for detection of cytochrome c oxidase Va of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

COX5a (C-19) is also recommended for detection of cytochrome c oxidase Va in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for COX5a siRNA (h): sc-62150, COX5a siRNA (m): sc-62151, COX5a shRNA Plasmid (h): sc-62150-SH, COX5a shRNA Plasmid (m): sc-62151-SH, COX5a shRNA (h) Lentiviral Particles: sc-62150-V and COX5a shRNA (m) Lentiviral Particles: sc-62151-V.

Molecular Weight of COX5a: 16 kDa.

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) 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.

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.



Try **COX5a (A-5): sc-376907**, our highly recommended monoclonal alternative to COX5a (C-19).