

SCO1 (N-15): sc-49108

BACKGROUND

The SCO1 and SCO2 protein homologs belong to the SCO1/2 family of proteins. SCO1 and SCO2 both localize to the mitochondrion and are inner membrane proteins crucial for copper insertion or transport to the active site of cytochrome c oxidase (COX). COX is a crucial component in energy production because it functions as the terminal enzyme in the respiratory chain. SCO1 is predominantly expressed in highly oxidative phosphorylation tissues such as brain, heart and muscle, while SCO2 is ubiquitously expressed. Defects in the gene encoding for SCO1 may cause cytochrome c oxidase deficiency, a heterogeneous disorder. Defects in the gene encoding for SCO2 may cause cardioencephalomyopathy with cytochrome c oxidase deficiency, a fatal infantile disorder characterized by hypertrophic cardiomyopathy, lactic acidosis and gliosis.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: SCO1 (human) mapping to 17p13.1; Sco1 (mouse) mapping to 11 B3.

SOURCE

SCO1 (N-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of SCO1 of human origin.

STORAGE

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

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-49108 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

SCO1 (N-15) is recommended for detection of SCO1 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).

SCO1 (N-15) is also recommended for detection of SCO1 in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for SCO1 siRNA (h): sc-61505, SCO1 siRNA (m): sc-61506, SCO1 shRNA Plasmid (h): sc-61505-SH, SCO1 shRNA Plasmid (m): sc-61506-SH, SCO1 shRNA (h) Lentiviral Particles: sc-61505-V and SCO1 shRNA (m) Lentiviral Particles: sc-61506-V.

Molecular Weight of SCO1: 29 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.

SELECT PRODUCT CITATIONS

1. Getz, J., Lin, D. and Medeiros, D.M. 2011. The cardiac copper chaperone proteins Sco1 and CCS are up-regulated, but Cox 1 and Cox4 are down-regulated, by copper deficiency. *Biol. Trace Elem. Res.* 143: 368-377.

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
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Try **SCO1 (D-1): sc-398001** or **SCO1 (B-9): sc-365380**, our highly recommended monoclonal alternatives to SCO1 (N-15).