

# SCO1 (H-66): sc-134777

## 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

1. Jaksch, M., et al. 2001. Cytochrome c oxidase deficiency due to mutations in SCO2, encoding a mitochondrial copper-binding protein, is rescued by copper in human myoblasts. *Hum. Mol. Genet.* 10: 3025-3035.
2. Balatri, E., et al. 2003. Solution structure of SCO1: a thioredoxin-like protein involved in cytochrome c oxidase assembly. *Structure* 11: 1431-1443.

## CHROMOSOMAL LOCATION

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

## SOURCE

SCO1 (H-66) is a rabbit polyclonal antibody raised against amino acids 178-243 mapping near the C-terminus of SCO1 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

SCO1 (H-66) 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), 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).

SCO1 (H-66) 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.

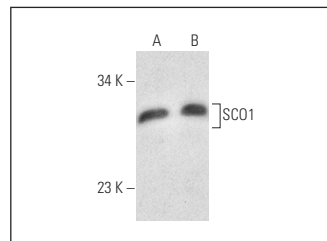
Molecular Weight of SCO1: 29 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200 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



SCO1 (H-66): sc-134777. Western blot analysis of SCO1 expression in Hep G2 (A) and HeLa (B) whole cell lysates.

## 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](http://www.scbt.com) or our catalog for detailed protocols and support products.


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Try **SCO1 (D-1): sc-398001** or **SCO1 (B-9): sc-365380**, our highly recommended monoclonal alternatives to SCO1 (H-66).