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SCO2 Antibody
Catalog # ASC10504

Specification

SCO2 Antibody - Product Information

Application	**WB, IHC, IF**
Primary Accession	O43819
Other Accession	O43819, 8134662
Reactivity	**Human**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**IgG**
Calculated MW	**Predicted: 29 kDa** **Observed: 33 kDa KDa**
Application Notes	**SCO2 antibody can be used for detection of SCO2 by Western blot at 0.5 - 2 µg/mL. Antibody can also be used for immunohistochemistry starting at 2.5 µg/mL. For immunofluorescence start at 20 µg/mL.**

SCO2 Antibody - Additional Information

Gene ID **6341**

Other Names
SCO2 Antibody: SCOD1, Protein SCO2 homolog, mitochondrial, SCO cytochrome oxidase deficient homolog 1 (yeast)

Target/Specificity
SCO1;

Reconstitution & Storage
SCO2 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.

Precautions
SCO2 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

SCO2 Antibody - Protein Information

Name SCO2

Function
Copper metallochaperone essential for the synthesis and maturation of cytochrome c oxidase subunit II (MT-CO2/COX2). Involved in transporting copper to the Cu(A) site on MT-CO2/COX2 (PubMed:15229189,

PubMed:17189203). Also acts as a thiol-disulfide oxidoreductase to regulate the redox state of the cysteines in SCO1 during maturation of MT-CO2/COX2 (PubMed:19336478).

Cellular Location
Mitochondrion inner membrane; Single-pass membrane protein

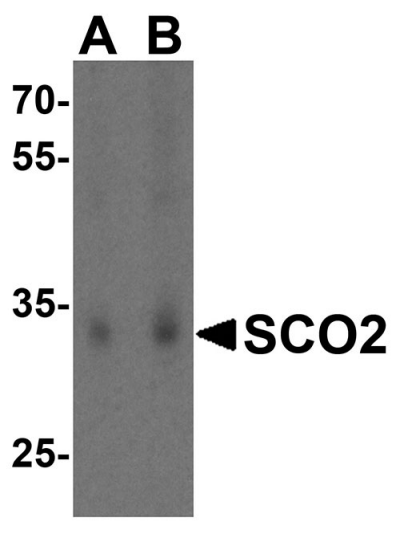
Tissue Location
Ubiquitous.

SCO2 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

SCO2 Antibody - Images



Western blot analysis of SCO2 in HL60 cell lysate lysate with SCO2 antibody at (A) 1 and (B) 2 µg/mL.

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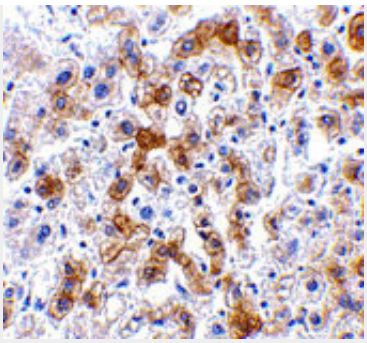
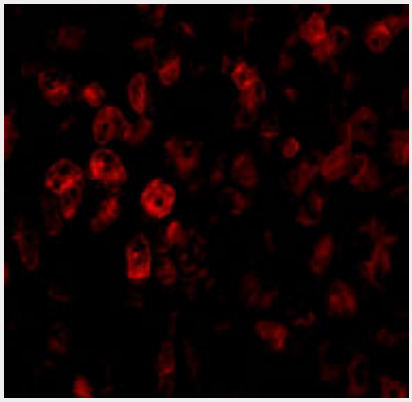


Immunohistochemistry of SCO2 in human liver tissue with SCO2 antibody at 2.5 µg/mL.



Immunofluorescence of SCO2 in Human Liver tissue with SCO2 antibody at 20 µg/mL.

SCO2 Antibody - Background

SCO2 Antibody: Synthesis of cytochrome c oxidase 2 was initially identified in yeast as one of two cytochrome c oxidase (COX) assembly proteins that enable the assembly of cytochrome c holoenzyme, a complex that catalyzes the transfer of reducing equivalents from cytochrome c to molecular oxygen and pumps protons across the inner mitochondrial membrane. Like their yeast homologs, the function of both SCO2 and SCO1 are dependent on copper ion binding. Recent studies suggest that SCO2 expression is regulated by p53, so that a decrease in p53 expression, such as in numerous tumors and cells lines, the drop in SCO2 expression leads to a shift from normal aerobic respiration towards the production of glycolytic ATP. Defects in the SCO2 protein are also associated with fatal infantile cardioencephalomyopathy and COX deficiency.

SCO2 Antibody - References

Glerum DM, Shtanko A, and Tzagoloff A. SCO1 and SCO2 act as high copy suppressors of a mitochondrial copper recruitment defect in Saccharomyces cerevisiae. J. Biol. Chem. 1996; 271:20531-5.
Horng Y-C, Leary SC, Cobine PA, et al. Human Sco1 and Sco2 function as copper-binding proteins. J. Biol. Chem. 2005; 280:34113-22.
Matoba S, Kang J-G, Patino WD, et al. p53 regulates mitochondrial respiration. Science 2006; 312:1650-3.
Papadopoulou LC, Sue CM, Davidson MM, et al. Fatal infantile cardioencephalomyopathy with COX deficiency and mutations in SCO2, a COX assembly gene. Nat. Genetics 1999; 23:333-7.