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Polyclonal Antibody to SCO2 - Aff - Purified

Alternate names: Synthesis of cytochrome c oxidase 2, cytochrome oxidase deficient homolog 2

Catalog No.: TA306396

Quantity: 0.1 mg

Background: 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.

Uniprot ID: O5KW01

NCBI: O43819

GeneID: 3184203

Host / Isotype: Rabbit / IgG

Immunogen: SCO2 antibody was raised against a 19 amino acid peptide from near the carboxy terminus of human SCO2.

Format:
State: Liquid Ig fraction
Purification: Peptide affinity chromatography
Buffer System: PBS containing 0.02% sodium azide

Applications:
ELISA.
Western blot: 0.5 – 1 µg/ml.
Immunohistochemistry on paraffin sections.
Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.

Specificity: This antibody detects SCO2.

Species Reactivity: **Tested:** Human

Add. Information: Blocking peptide available: AP30767CP-N

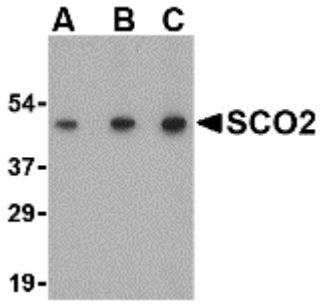
Storage: Store at 2 - 8 °C for up to one month or (in aliquots) at -20 °C for longer. Avoid repeated freezing and thawing.
Shelf life: one year from despatch.

General Readings: 1. Glerum DM, Shtanko A, Tzagoloff A. SCO1 and SCO2 act as high copy suppressors of a mitochondrial copper recruitment defect in Saccharomyces cerevisiae. J Biol Chem. 1996

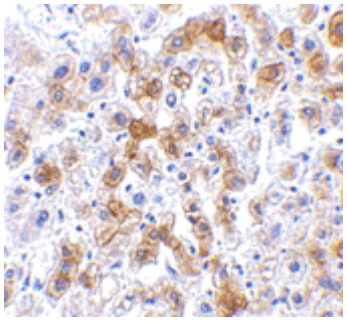
Aug 23;271(34):20531-5. PubMed PMID: 8702795.
2. Horng YC, Leary SC, Cobine PA, Young FB, George GN, Shoubridge EA, et al. Human Sco1 and Sco2 function as copper-binding proteins. J Biol Chem. 2005 Oct 7;280(40):34113-22. Epub 2005 Aug 9. PubMed PMID: 16091356.
3. Matoba S, Kang J-G, Patino WD, et al. p53 regulates mitochondrial respiration. Science 2006; 312:1650-3.
4. Papadopoulou LC, Sue CM, Davidson MM, Tanji K, Nishino I, Sadlock JE, et al. Fatal infantile cardioencephalomyopathy with COX deficiency and mutations in SCO2, a COX assembly gene. Nat Genet. 1999 Nov;23(3):333-7. PubMed PMID: 10545952.

Pictures:

Western blot analysis of SCO2 in human liver tissue lysate with SCO2 antibody at (A) 0.5, (B) 1 and (C) 2 ug/ml.



Immunohistochemistry of SCO2 in human liver tissue with SCO2 antibody at 2.5 ug/ml.



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