

Instruction Manual

Catalog Number	PK-AB718-4045
Synonyms	SCO2 Antibody; Synthesis of cytochrome c oxidase 2, cytochrome oxidase deficient homolog 2
Description	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.
Quantity	100 µg
Source / Host	Rabbit
Immunogen	SCO2 antibody was raised in rabbits against a 19 amino acid peptide from near the carboxy terminus of human SCO2.
Purification Method	Affinity chromatography purified via peptide column.
Clone / IgG Subtype	Polyclonal antibody
Species Reactivity	Human
Specificity	
Formulation	Antibody is supplied in PBS containing 0.02% sodium azide.
Reconstitution	During shipment, small volumes of antibody will occasionally become entrapped in the seal of the product vial. For products with volumes of 200 µl or less, we recommend gently tapping the vial on a hard surface or briefly centrifuging the vial in a tabletop centrifuge to dislodge any liquid in the container's cap.
Storage & Stability	Antibody can be stored at 4°C for three months and at -20°C 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.
Applications	E, WB, IHC, IF Note: Antibody might be suitable for other applications not tested so far. Optimal concentrations for each application have to be determined individually. 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.
Images	Available upon request.
References	Glerum DM, Shtanko A, and Tzagoloff A. SCO1 and SCO2 act as high copy suppressors of a mitochondrial copper recruitment defect in <i>Saccharomyces cerevisiae</i> . <i>J. Biol. Chem.</i> 1996; 271:20531-5. Horng Y-C, Leary SC, Cobine PA, et al. Human Sco1 and Sco2 function as copper-binding proteins. <i>J. Biol. Chem.</i> 2005; 280:34113-22. Matoba S, Kang J-G, Patino WD, et al. p53 regulates mitochondrial respiration. <i>Science</i> 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. <i>Nat. Genetics</i> 1999; 23:333-7 (07-01D)
Images	Available upon request.
Related Products	Cat.No. PK-AB718-4045P; SCO2 Peptide Cat.No. PK-AB718-1304; Human Liver Tissue Lysate

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