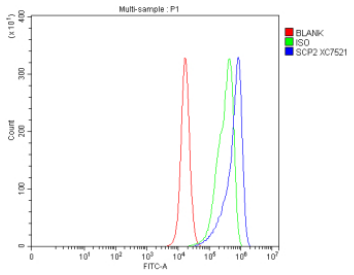
SCP2 Antibody / Sterol carrier protein 2 (FY12066)

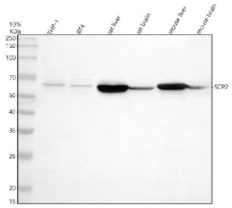
Catalog No.	Formulation	Size
FY12066	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

Availability	1-2 days
Species Reactivity	Human, Mouse, Rat
Format	Lyophilized
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	P22307
Applications	Western Blot : 0.25-0.5ug/ml Flow Cytometry : 1-3ug/million cells ELISA : 0.1-0.5ug/ml
Limitations	This SCP2 antibody is available for research use only.



Flow Cytometry analysis of PC-3 cells using anti-SCP2 antibody. Overlay histogram showing PC-3 cells stained with (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-SCP2 antibody (1 ug/million cells) for 30 min at 20oC. DyLight 488 conjugated goat anti-rabbit IgG (5-10 ug/million cells) was used as secondary antibody for 30 minutes at 20oC. Isotype control antibody (Green line) was rabbit IgG (1 ug/million cells) used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.



Western blot analysis of SCP2 using anti-SCP2 antibody. Electrophoresis was performed on a 10% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. Lane 1: human THP-1 whole cell lysates, Lane 2: human RT4 whole cell lysates, Lane 3: rat liver tissue lysates, Lane 4: rat brain tissue lysates, Lane 5: mouse liver tissue lysates, Lane 6: mouse brain tissue lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-SCP2 antibody at 0.5 ug/ml overnight at 4oC, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal was developed using an ECL Plus Western Blotting Substrate. A specific band was detected for SCP2 at approximately 59 kDa. The expected band size for SCP2 is at 59 kDa.

Description

SCP2 antibody detects Sterol carrier protein 2, encoded by the SCP2 gene. Sterol carrier protein 2 is a non-specific lipid transfer protein involved in intracellular lipid metabolism, peroxisomal function, and cholesterol trafficking. SCP2 antibody provides researchers with a valuable reagent for studying lipid transport, peroxisomal disorders, and cholesterol regulation.

Sterol carrier protein 2 plays a critical role in binding and transferring a wide range of lipids, including cholesterol, fatty acids, and phospholipids. Research using SCP2 antibody has shown that it localizes to peroxisomes, mitochondria, and the cytosol, where it helps mediate transport between organelles. By facilitating lipid shuttling, SCP2 contributes to membrane biosynthesis, signaling, and energy metabolism.

Studies with SCP2 antibody have revealed that the protein is synthesized as a multifunctional peroxisomal enzyme complex containing both thiolase activity and lipid transfer function. This dual nature allows SCP2 to integrate fatty acid oxidation with lipid transport, making it essential for peroxisomal physiology. Loss of SCP2 activity disrupts cholesterol homeostasis and leads to peroxisome-related disease phenotypes.

Dysregulation of Sterol carrier protein 2 has been associated with metabolic disease, cancer, and neurodegeneration. Research using SCP2 antibody has shown that reduced expression alters cholesterol trafficking, contributing to lipid storage disorders. Elevated expression has been observed in tumors, where SCP2 enhances membrane biosynthesis and supports proliferation. These findings highlight its dual role in normal physiology and disease pathology.

SCP2 antibody is widely applied in immunohistochemistry, western blotting, and immunofluorescence. Immunohistochemistry demonstrates expression in liver, adrenal gland, and brain; western blotting quantifies levels in cell lines and tissues; immunofluorescence reveals localization to peroxisomes and cytoplasm. These methods make SCP2 antibody indispensable for lipid transport research.

By providing validated SCP2 antibody reagents, NSJ Bioreagents supports studies into lipid metabolism, peroxisomal disorders, and disease. Detection of Sterol carrier protein 2 provides researchers with insight into how lipid transfer proteins influence cellular function and pathology.

Application Notes

Optimal dilution of the SCP2 antibody should be determined by the researcher.

Immunogen

E.coli-derived human SCP2 recombinant protein (Position: R33-L547) was used as the immunogen for the SCP2 antibody.

Storage

After reconstitution, the SCP2 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.