SANTA CRUZ BIOTECHNOLOGY, INC.

OSBP (C-13): sc-49466

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The Oxysterol-binding protein (OSBP) family of proteins consist of OSBP (OSBP1) and OSBP2 (ORP-4), which share a high overall similarity. OSBPs are involved in lipid metabolism and signal transduction, as well as vesicle transport, and can translocate to the periphery of Golgi membranes when they are bound to oxysterols. The OSBP protein transports sterols from lysosomes to the nucleus, where sterols downregulate the genes for HMG synthetase, HMG-CoA reductase and the low density lipoprotein receptor (LDLR). OSBP localizes to the cytosol and is widely expressed, while OSBP2 is mainly detected in testis, retina and fetal liver. The extracellular signal-regulated kinase (ERK) signaling pathway is controlled by OSBP via its cholesterol-binding properties. OSBP binds with a high affinity to 25-hydroxycholesterol (25-HC), a suppressor of cholesterol synthesis gene transcription in cultured cells.

REFERENCES

1. Levanon, D., et al. 1990. cDNA cloning of human oxysterol-binding protein and localization of the gene to human chromosome 11 and mouse chromosome 19. Genomics 7: 65-74.
2. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 167040. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
3. Im, Y.J., et al. 2005. Structural mechanism for sterol sensing and transport by OSBP-related proteins. Nature 437: 154-158.
4. Balla, A., et al. 2005. A plasma membrane pool of phosphatidylinositol 4-phosphate is generated by phosphatidylinositol 4-kinase type-III α: studies with the PH domains of the oxysterol binding protein and FAPP1. Mol. Biol. Cell. 16: 1282-1295.
5. Nishimura, T., et al. 2005. Inhibition of cholesterol biosynthesis by 25-hydroxycholesterol is independent of OSBP. Genes Cells 10: 793-801.

CHROMOSOMAL LOCATION

Genetic locus: OSBP (human) mapping to 11q12-q13; Osbp (mouse) mapping to 19 A.

SOURCE

OSBP (C-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of OSBP 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.

Blocking peptide available for competition studies, sc-49466 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

OSBP (C-13) is recommended for detection of OSBP of 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).

OSBP (C-13) is also recommended for detection of OSBP in additional species, including canine.

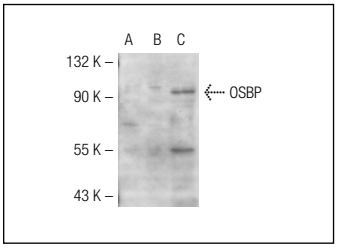
Suitable for use as control antibody for OSBP siRNA (h): sc-61264, OSBP shRNA Plasmid (h): sc-61264-SH and OSBP shRNA (h) Lentiviral Particles: sc-61264-V.

Molecular Weight of OSBP: 90 kDa.

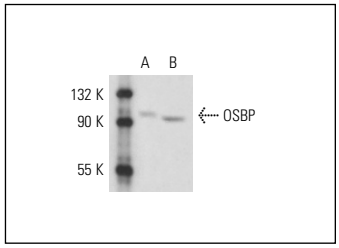
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



OSBP (C-13): sc-49466. Western blot analysis of OSBP expression in non-transfected 293T: sc-117752 (**A**), mouse OSBP transfected 293T: sc-122272 (**B**) and JAR (**C**) whole cell lysates.



OSBP (C-13): sc-49466. Western blot analysis of OSBP expression in HUV-EC-C (**A**) and JAR (**B**) whole cell lysates.

RESEARCH USE

For research use only, not for use in diagnostic procedures.