

OSBP (H-60): sc-134747

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-hydroxy-cholesterol (25-HC), a suppressor of cholesterol synthesis gene transcription in cultured cells.

REFERENCES

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- Im, Y.J., et al. 2005. Structural mechanism for sterol sensing and transport by OSBP-related proteins. *Nature* 437: 154-158.
- 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.
- Nishimura, T., et al. 2005. Inhibition of cholesterol biosynthesis by 25-hydroxycholesterol is independent of OSBP. *Genes Cells* 10: 793-801.
- Wang, P.Y., et al. 2005. OSBP is a cholesterol-regulated scaffolding protein in control of ERK 1/2 activation. *Science* 307: 1472-1476.

CHROMOSOMAL LOCATION

Genetic locus: OSBP2 (human) mapping to 22q12.2; Osbpl7 (mouse) mapping to 11 D.

SOURCE

OSBP (H-60) is a rabbit polyclonal antibody raised against amino acids 631-690 mapping near the C-terminus of OSBP of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

OSBP (H-60) is recommended for detection of OSBP of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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 (H-60) is also recommended for detection of OSBP in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for OSBP siRNA (h): sc-61264, OSBP siRNA (m): sc-151327, OSBP shRNA Plasmid (h): sc-61264-SH, OSBP shRNA Plasmid (m): sc-151327-SH, OSBP shRNA (h) Lentiviral Particles: sc-61264-V and OSBP shRNA (m) Lentiviral Particles: sc-151327-V.

Molecular Weight of OSBP: 90 kDa.

Positive Controls: HUV-EC-C + VEGF cell lysate: sc-24709 or JAR cell lysate: sc-2276.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.


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Try **OSBP (A-5): sc-365771**, our highly recommended monoclonal alternative to OSBP (H-60).