SANTA CRUZ BIOTECHNOLOGY, INC.

OSBP2 (D-16): sc-54922

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

REFERENCES

1. Jaworski, C.J., Moreira, E., Li, A., Lee, R. and Rodriguez, I.R. 2001. A family of 12 human genes containing oxysterol-binding domains. Genomics 78: 185-196.
2. Moreira, E.F., Jaworski, C., Li, A. and Rodriguez, I.R. 2001. Molecular and biochemical characterization of a novel oxysterol-binding protein (OSBP2) highly expressed in retina. J. Biol. Chem. 276: 18570-18578.
3. Wang, C., JeBailey, L. and Ridgway, N.D. 2002. Oxysterol-binding protein (OSBP)-related protein 4 binds 25-hydroxycholesterol and interacts with Vimentin intermediate filaments. Biochem. J. 361: 461-472.
4. Henriques Silva, N., Vasconcellos Fournier, M., Pimenta, G., Pulcheri, W.A., Spector, N. and da Costa Carvalho Mda, G. 2003. HLM/OSBP2 is expressed in chronic myeloid leukemia. Int. J. Mol. Med. 12: 663-666.
5. Lehto, M. and Olkkonen, V.M. 2003. The OSBP-related proteins: a novel protein family involved in vesicle transport, cellular lipid metabolism, and cell signalling. Biochim. Biophys. Acta 1631: 1-11.

CHROMOSOMAL LOCATION

Genetic locus: OSBP2 (human) mapping to 22q12.2.

SOURCE

OSBP2 (D-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of OSBP2 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-54922 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

OSBP2 (D-16) is recommended for detection of OSBP2 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).

Suitable for use as control antibody for OSBP2 siRNA (h): sc-62719, OSBP2 shRNA Plasmid (h): sc-62719-SH and OSBP2 shRNA (h) Lentiviral Particles: sc-62719-V.

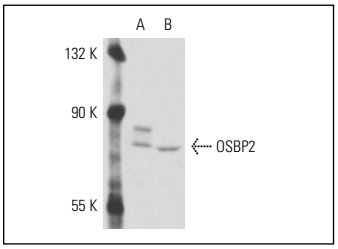
Molecular Weight of OSBP2: 90 kDa.

Positive Controls: ARPE-19 whole cell lysate: sc-364357 or Hs 181 Tes whole cell lysate: sc-364779.

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



OSBP2 (D-16): sc-54922. Western blot analysis of OSBP2 expression in ARPE-19 (**A**) and HS 181.Tes (**B**) whole cell lysates.

RESEARCH USE

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