SANTA CRUZ BIOTECHNOLOGY, INC.

OSBP2 (G-8): sc-365951

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

REFERENCES

1. Jaworski, C.J., et al. 2001. A family of 12 human genes containing oxysterol-binding domains. Genomics 78: 185-196.
2. Moreira, E.F., et al. 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., et al. 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., et al. 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.
6. Wyles, J.P., et al. 2007. Characterization of the sterol-binding domain of oxysterol-binding protein (OSBP)-related protein 4 reveals a novel role in vimentin organization. Exp. Cell Res. 313: 1426-1437.

CHROMOSOMAL LOCATION

Genetic locus: OSBP2 (human) mapping to 22q12.2; Osbp2 (mouse) mapping to 11 A1.

SOURCE

OSBP2 (G-8) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 479-507 within an internal region of OSBP2 of mouse origin.

PRODUCT

Each vial contains 200 µg IgM in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-365951 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

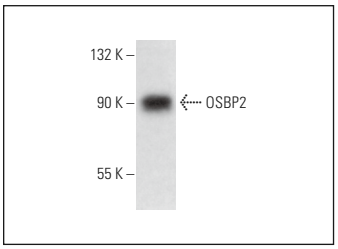
OSBP2 (G-8) is recommended for detection of OSBP2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) 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 siRNA (m): sc-62720, OSBP2 shRNA Plasmid (h): sc-62719-SH, OSBP2 shRNA Plasmid (m): sc-62720-SH, OSBP2 shRNA (h) Lentiviral Particles: sc-62719-V and OSBP2 shRNA (m) Lentiviral Particles: sc-62720-V.

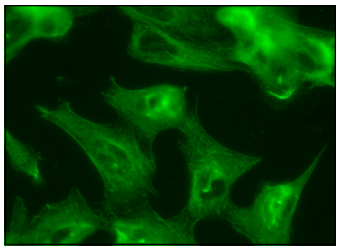
Molecular Weight of OSBP2: 101 kDa.

Positive Controls: c4 whole cell lysate: sc-364186, Y79 cell lysate: sc-2240 or F9 cell lysate: sc-2245.

DATA



OSBP2 (G-8): sc-365951. Western blot analysis of OSBP2 expression in Y79 whole cell lysate.



OSBP2 (G-8): sc-365951. Immunofluorescence staining of methanol-fixed NIH/3T3 cells showing membrane localization.

STORAGE

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

RESEARCH USE

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

PROTOCOLS

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