

OSBP2 (B-1): sc-365922

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.

CHROMOSOMAL LOCATION

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

SOURCE

OSBP2 (B-1) is a mouse monoclonal antibody raised against amino acids 1-190 mapping at the N-terminus of OSBP2 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

OSBP2 (B-1) is available conjugated to agarose (sc-365922 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-365922 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365922 PE), fluorescein (sc-365922 FITC), Alexa Fluor® 488 (sc-365922 AF488), Alexa Fluor® 546 (sc-365922 AF546), Alexa Fluor® 594 (sc-365922 AF594) or Alexa Fluor® 647 (sc-365922 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-365922 AF680) or Alexa Fluor® 790 (sc-365922 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

OSBP2 (B-1) is recommended for detection of OSBP2 of 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), immunohistochemistry (including paraffin-embedded sections) (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.

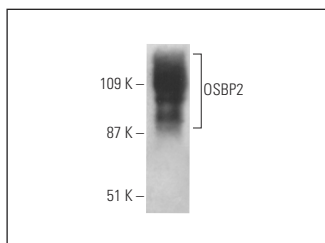
Molecular Weight of OSBP2: 101 kDa.

Positive Controls: ARPE-19 whole cell lysate: sc-364357, Y79 nuclear extract: sc-2126 or Hs 181 Tes whole cell lysate: sc-364779.

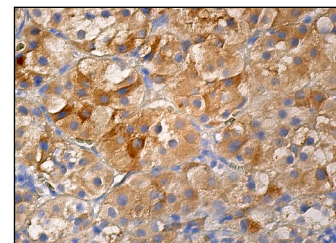
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



OSBP2 (B-1) HRP: sc-365922 HRP. Direct western blot analysis of OSBP2 expression in Y79 nuclear extract.



OSBP2 (B-1): sc-365922. Immunoperoxidase staining of formalin fixed, paraffin-embedded human adrenal gland tissue showing cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

- Roberts, B.L., et al. 2019. Persistent, multi-generational reduction of oxysterol-binding protein caused by compound treatment induces prophylactic anti-viral activity. *ACS Chem. Biol.* 14: 276-287.
- Bensen, R.C., et al. 2021. Small molecule targeting of oxysterol-binding protein (OSBP)-related protein 4 and OSBP inhibits ovarian cancer cell proliferation in monolayer and spheroid cell models. *ACS Pharmacol. Transl. Sci.* 4: 744-756.

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.