SANTA CRUZ BIOTECHNOLOGY, INC.

OSBP (A-5): sc-365771

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.

CHROMOSOMAL LOCATION

Genetic locus: OSBP (human) mapping to 11q12.1; Osbp (mouse) mapping to 19 A.

SOURCE

OSBP (A-5) is a mouse monoclonal antibody raised against amino acids 631-690 mapping near the C-terminus of OSBP of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

OSBP (A-5) is available conjugated to agarose (sc-365771 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-365771 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365771 PE), fluorescein (sc-365771 FITC), Alexa Fluor® 488 (sc-365771 AF488), Alexa Fluor® 546 (sc-365771 AF546), Alexa Fluor® 594 (sc-365771 AF594) or Alexa Fluor® 647 (sc-365771 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-365771 AF680) or Alexa Fluor® 790 (sc-365771 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

OSBP (A-5) is recommended for detection of OSBP 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 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.

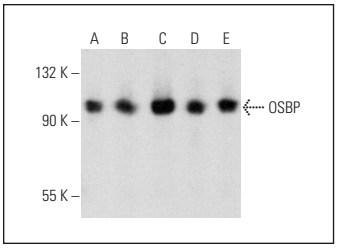
Molecular Weight of OSBP: 90 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, LNCaP cell lysate: sc-2231 or CCRF-CEM cell lysate: sc-2225.

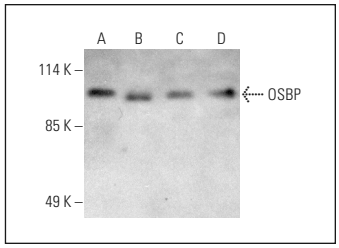
RECOMMENDED SUPPORT REAGENTS

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.

DATA



OSBP (A-5): sc-365771. Western blot analysis of OSBP expression in HeLa (**A**), K-562 (**B**), LNCaP (**C**), JAR (**D**) and Jurkat (**E**) whole cell lysates.



OSBP (A-5) HRP: sc-365771 HRP. Direct western blot analysis of OSBP expression in Jurkat (**A**), NCI-H292 (**B**), SUP-T1 (**C**) and CCRF-CEM (**D**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Roberts, B.L., et al. 2019. Transient compound treatment induces a multi-generational reduction of oxysterol-binding protein caused by compound treatment induces prophylactic anti-viral activity. ACS Chem. Biol. 14: 276-287.
2. Roberts, B.L., et al. 2019. Differing activities of oxysterol-binding protein (OSBP) targeting anti-viral compounds. Antiviral Res. 170: 104548.
3. 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.