SANTA CRUZ BIOTECHNOLOGY, INC.

ORP-2 (C-16): sc-66567

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Members of the oxyserol-binding protein (OSBP) family function as intracellular lipid receptors. 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. ORPs (OSBP-related proteins) belong to a subfamily of OSBPs and consist of ORP-1 and ORP-2. The ORPs have a highly conserved OSBP-type sterol-binding region and a Pleckstrin homology domain. They strongly bind to phosphatidic acid and weakly bind to phosphatidylinositol 3-phosphate. Two isoforms of ORP-2 are produced due to alternative splicing. ORP-2 is expressed only in retina, retinal pigment epithelium choroid, pineal gland and cultured retinal pigment epithelial cells. Overexpression of ORP-2 decreases cell growth and blocks Golgi-derived vesicle transport.

REFERENCES

1. Laitinen, S., et al. 1999. Family of human oxysterol binding protein (OSBP) homologues. A novel member implicated in brain sterol metabolism. J. Lipid Res. 40: 2204-2211.
2. Xu, Y., et al. 2001. Novel members of the human oxysterol-binding protein family bind phospholipids and regulate vesicle transport. J. Biol. Chem. 276: 18407-18414.
3. Lehto, M., et al. 2001. The OSBP-related protein family in humans. J. Lipid Res. 42: 1203-1213.
4. Jaworski, C.J., et al. 2001. A family of human genes containing oxysterol-binding domains. Genomics 78: 185-196.
5. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 606731. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
6. Fairn, G.D., et al. 2005. Identification and assessment of the role of a nominal phospholipid binding region of ORP(Oxysterol-binding-protein-related protein 1 short) in the regulation of vesicular transport. Biochem. J. 387: 889-896.

CHROMOSOMAL LOCATION

Genetic locus: OSBPL2 (human) mapping to 20q13.33; Osbpl2 (mouse) mapping to 2 H4.

SOURCE

ORP-2 (C-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of ORP-2 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-66567 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

ORP-2 (C-16) is recommended for detection of Oxysterol-binding protein-related protein 2 of mouse, rat and 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 ORP-2 siRNA (h): sc-62717, ORP-2 siRNA (m): sc-62718, ORP-2 shRNA Plasmid (h): sc-62717-SH, ORP-2 shRNA Plasmid (m): sc-62718-SH, ORP-2 shRNA (h) Lentiviral Particles: sc-62717-V and ORP-2 shRNA (m) Lentiviral Particles: sc-62718-V.

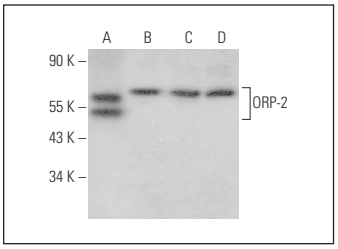
Molecular Weight of ORP-2: 55 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, K-562 whole cell lysate: sc-2203 or HL-60 whole cell lysate: sc-2209.

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



ORP-2 (C-16): sc-66567. Western blot analysis of ORP-2 expression in Hep G2 (**A**), K-562 (**B**), HL-60 (**C**) and NIH/3T3 (**D**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Li, D., et al. 2013. cAMP-stimulated phosphorylation of diaphanous 1 regulates protein stability and interaction with binding partners in adrenocortical cells. Mol. Biol. Cell 24: 848-857.

STORAGE

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