

ORP-1 (B-3): sc-376602

BACKGROUND

Members of the oxysterol-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 consists 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. Three isoforms of ORP-1 are produced due to alternative splicing. Isoform ORP-1A is expressed only in retina, brain, pineal gland, fetal brain, and cultured retinal pigment epithelial cells, whereas ORP-1B is expressed ubiquitously.

REFERENCES

- 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.
- 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.
- Lehto, M., et al. 2001. The OSBP-related protein family in humans. *J. Lipid Res.* 42: 1203-1213.
- Jaworski, C.J., et al. 2001. A family of 12 human genes containing oxysterol-binding domains. *Genomics* 78: 185-196.
- Online Mendelian Inheritance in Man, OMIM[™]. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 606730. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

CHROMOSOMAL LOCATION

Genetic locus: OSBPL1A (human) mapping to 18q11.2; Osbpl1a (mouse) mapping to 18 A1.

SOURCE

ORP-1 (B-3) is a mouse monoclonal antibody raised against amino acids 898-950 mapping at the C-terminus of ORP-1 of human origin.

PRODUCT

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

ORP-1 (B-3) is available conjugated to agarose (sc-376602 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376602 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376602 PE), fluorescein (sc-376602 FITC), Alexa Fluor[®] 488 (sc-376602 AF488), Alexa Fluor[®] 546 (sc-376602 AF546), Alexa Fluor[®] 594 (sc-376602 AF594) or Alexa Fluor[®] 647 (sc-376602 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-376602 AF680) or Alexa Fluor[®] 790 (sc-376602 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

ORP-1 (B-3) is recommended for detection of ORP-1 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 ORP-1 siRNA (h): sc-62715, ORP-1 siRNA (m): sc-62716, ORP-1 shRNA Plasmid (h): sc-62715-SH, ORP-1 shRNA Plasmid (m): sc-62716-SH, ORP-1 shRNA (h) Lentiviral Particles: sc-62715-V and ORP-1 shRNA (m) Lentiviral Particles: sc-62716-V.

Molecular Weight (predicted) of ORP-1 isoform OSBPL1B: 108 kDa.

Molecular Weight (predicted) of ORP-1 isoform OSBPL1A: 50 kDa.

Molecular Weight (predicted) of ORP-1 isoform OSBPL1C: 106 kDa.

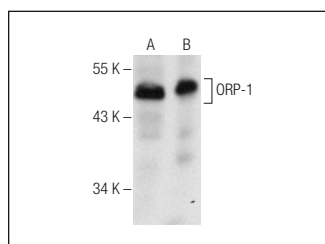
Molecular Weight (observed) of ORP-1: 89 kDa.

Positive Controls: mouse heart extract: sc-2254 or human skeletal muscle extract: sc-363776.

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



ORP-1 (B-3): sc-376602. Western blot analysis of ORP-1 expression in mouse heart (A) and human skeletal muscle (B) tissue extracts.

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.