SANTA CRUZ BIOTECHNOLOGY, INC.

ORP-10 (Q-15): sc-99576



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 through ORP-11. 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. The gene encoding the 764 amino acid ORP-10 (Oxysterol-binding protein-related protein 10) protein maps to human chromosome 3, which spans 200 million base pairs and encodes between 1,100 and 1,500 genes.

REFERENCES

- Jaworski, C.J., Moreira, E., Li, A., Lee, R. and Rodriguez, I.R. 2001. A family of 12 human genes containing oxysterol-binding domains. Genomics 78: 185-196.
- Lehto, M., Laitinen, S., Chinetti, G., Johansson, M., Ehnholm, C., Staels, B., Ikonen, E. and Olkkonen, V.M. 2001. The OSBP-related protein family in humans. J. Lipid Res. 42: 1203-1213.
- Anniss, A.M., Apostolopoulos, J., Dworkin, S., Purton, L.E. and Sparrow, R.L. 2002. An oxysterol-binding protein family identified in the mouse. DNA Cell Biol. 21: 571-580.
- 4. 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.
- Olkkonen, V.M. and Levine, T.P. 2004. Oxysterol binding proteins: in more than one place at one time? Biochem. Cell Biol. 82: 87-98.
- Skirpan, A.L., Dowd, P.E., Sijacic, P., Jaworski, C.J., Gilroy, S. and Kao, T.H. 2006. Identification and characterization of PiORP1, a Petunia oxysterolbinding-protein related protein involved in receptor-kinase mediated signaling in pollen, and analysis of the ORP gene family in *Arabidopsis*. Plant Mol. Biol. 61: 553-565.
- Suchanek, M., Hynynen, R., Wohlfahrt, G., Lehto, M., Johansson, M., Saarinen, H., Radzikowska, A., Thiele, C. and Olkkonen, V.M. 2007. The mammalian oxysterol-binding protein-related proteins (ORPs) bind 25hydroxycholesterol in an evolutionarily conserved pocket. Biochem. J. 405: 473-480.
- Lessmann, E., Ngo, M., Leitges, M., Minguet, S., Ridgway, N.D. and Huber, M. 2007. Oxysterol-binding protein-related protein (ORP) 9 is a PDK-2 substrate and regulates Akt phosphorylation. Cell. Signal. 19: 384-392.
- Yan, D., Mäyränpää, M.I., Wong, J., Perttilä, J., Lehto, M., Jauhiainen, M., Kovanen, P.T., Ehnholm, C., Brown, A.J. and Olkkonen, V.M. 2008. OSBP-related protein 8 (ORP8) suppresses ABCA1 expression and cholesterol efflux from macrophages. J. Biol. Chem. 283: 332-340.

RESEARCH USE

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

CHROMOSOMAL LOCATION

Genetic locus: OSBPL10 (human) mapping to 3p23; Osbp110 (mouse) mapping to 9 F3.

SOURCE

ORP-10 (Ω -15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of ORP-10 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-99576 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

ORP-10 (Q-15) is recommended for detection of ORP-10 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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); non cross-reactive with other Olfactory Receptors.

ORP-10 (Q-15) is also recommended for detection of ORP-10 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for ORP-10 siRNA (h): sc-78052, ORP-10 siRNA (m): sc-151318, ORP-10 shRNA Plasmid (h): sc-78052-SH, ORP-10 shRNA Plasmid (m): sc-151318-SH, ORP-10 shRNA (h) Lentiviral Particles: sc-78052-V and ORP-10 shRNA (m) Lentiviral Particles: sc-151318-V.

Molecular Weight of ORP-10: 84 kDa.

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) Immunofluo-rescence: 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.

STORAGE

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

PROTOCOLS

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