

# ORP-8 (K-14): sc-168851

## 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 consisting 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. ORP-8 (oxysterol binding protein-like 8), also known as MST120, OSBP10, MSTP120 or OSBPL8, is an 889 amino acid widely expressed protein belonging to the OSBP family. Localized to the endoplasmic reticulum, ORP-8 suppresses ABC1 (ATP binding cassette transporter A1) expression and cholesterol efflux from macrophages. Existing as two isoforms due to alternative splicing events, ORP-8 may modulate the development of atherosclerosis.

## REFERENCES

1. Olkkonen, V.M., et al. 2006. The OSBP-related proteins (ORPs): global sterol sensors for coordination of cellular lipid metabolism, membrane trafficking and signalling processes? *Biochem. Soc. Trans.* 34: 389-391.
2. Raychaudhuri, S., et al. 2006. Nonvesicular sterol movement from plasma membrane to ER requires oxysterol-binding protein-related proteins and phosphoinositides. *J. Cell Biol.* 173: 107-119.
3. Yan, D., et al. 2007. Expression of human OSBP-related protein 1L in macrophages enhances atherosclerotic lesion development in LDL receptor-deficient mice. *Arterioscler. Thromb. Vasc. Biol.* 27: 1618-1624.
4. Suchanek, M., et al. 2007. The mammalian oxysterol-binding protein-related proteins (ORPs) bind 25-hydroxycholesterol in an evolutionarily conserved pocket. *Biochem. J.* 405: 473-480.
5. Fairn, G.D. and McMaster, C.R. 2008. Emerging roles of the oxysterol-binding protein family in metabolism, transport, and signaling. *Cell. Mol. Life Sci.* 65: 228-236.
6. Yan, D. and Olkkonen, V.M. 2008. Characteristics of oxysterol binding proteins. *Int. Rev. Cytol.* 265: 253-285.
7. Yan, D., et al. 2008. OSBP-related protein 8 (ORP8) suppresses ABCA1 expression and cholesterol efflux from macrophages. *J. Biol. Chem.* 283: 332-340.

## CHROMOSOMAL LOCATION

Genetic locus: OSBPL8 (human) mapping to 12q21.2; Osbpl8 (mouse) mapping to 10 D1.

## 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](http://www.scbt.com) or our catalog for detailed protocols and support products.

## SOURCE

ORP-8 (K-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of ORP-8 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-168851 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

ORP-8 (K-14) is recommended for detection of ORP-8 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 ORP family members.

Suitable for use as control antibody for ORP-8 siRNA (h): sc-96001, ORP-8 siRNA (m): sc-151323, ORP-8 shRNA Plasmid (h): sc-96001-SH, ORP-8 shRNA Plasmid (m): sc-151323-SH, ORP-8 shRNA (h) Lentiviral Particles: sc-96001-V and ORP-8 shRNA (m) Lentiviral Particles: sc-151323-V.

Molecular Weight of ORP-8: 101 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) 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.

## RESEARCH USE

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