

OSMR  $\beta$  (C-7): sc-376380

The Power to Question

## BACKGROUND

Oncostatin M (OSM) is a glycoprotein that inhibits the growth of a broad range of human tumor cell lines, but does not influence the growth of normal human fibroblasts. Expression of OSM is greatest in activated monocytic and lymphocytic cell lines and in normal adherent macrophages. Amino acid sequence analysis of OSM has revealed homology with leukemia inhibitory factor (LIF), granulocyte colony stimulating factor (G-CSF) and interleukin 6 (IL-6), all of which affect the growth and differentiation of a broad range of cell types, including those of hematopoietic origin. OSMR  $\beta$  (oncostatin M receptor  $\beta$ ), also known as OSMR, is a 979 amino acid single-pass type I membrane protein that functions as a receptor for OSM. Expressed at high levels in neural cells, as well as fibroblast and epithelial tumor lines, OSMR  $\beta$  exists as a heterodimer that interacts with interleukins and is able to transduce OSM-induced signaling events. Defects in the gene encoding OSMR  $\beta$  are the cause of primary cutaneous amyloidosis (PCA), an autosomal dominant disorder characterized by chronic itching of the skin.

## REFERENCES

1. Mosley, B., et al. 1996. Dual oncostatin M (OSM) receptors. Cloning and characterization of an alternative signaling subunit conferring OSM-specific receptor activation. *J. Biol. Chem.* 271: 32635-32643.
2. Blanchard, F., et al. 2001. Oncostatin M regulates the synthesis and turnover of gp130, leukemia inhibitory factor receptor  $\alpha$ , and oncostatin M receptor  $\beta$  by distinct mechanisms. *J. Biol. Chem.* 276: 47038-47045.
3. Ruprecht, K., et al. 2001. Effects of oncostatin M on human cerebral endothelial cells and expression in inflammatory brain lesions. *J. Neuropathol. Exp. Neurol.* 60: 1087-1098.
4. Savarese, T.M., et al. 2002. Coexpression of oncostatin M and its receptors and evidence for Stat3 activation in human ovarian carcinomas. *Cytokine* 17: 324-334.
5. Radtke, S., et al. 2002. Novel role of Janus kinase 1 in the regulation of oncostatin M receptor surface expression. *J. Biol. Chem.* 277: 11297-11305.
6. Dillon, S.R., et al. 2004. Interleukin 31, a cytokine produced by activated T cells, induces dermatitis in mice. *Nat. Immunol.* 5: 752-760.
7. Abir, R., et al. 2005. Immunocytochemical detection and reverse transcription polymerase chain reaction expression of oncostatin M (OSM) and its receptor (OSMR  $\beta$ ) in human fetal and adult ovaries. *Fertil. Steril.* 83: 1188-1196.

## CHROMOSOMAL LOCATION

Genetic locus: *Osmr* (mouse) mapping to 15 A1.

## SOURCE

OSMR  $\beta$  (C-7) is a mouse monoclonal antibody raised against amino acids 782-971 mapping at the C-terminus of OSMR  $\beta$  of mouse origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

OSMR  $\beta$  (C-7) is recommended for detection of OSMR  $\beta$  of mouse origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g 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 OSMR  $\beta$  siRNA (m): sc-40069, OSMR  $\beta$  shRNA Plasmid (m): sc-40069-SH and OSMR  $\beta$  shRNA (m) Lentiviral Particles: sc-40069-V.

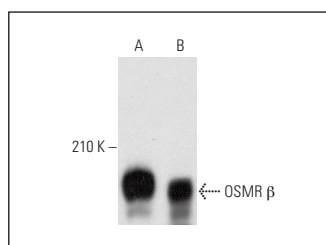
Molecular Weight of OSMR  $\beta$ : 180 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210, Sol8 cell lysate: sc-2249 or EOC 20 whole cell lysate.

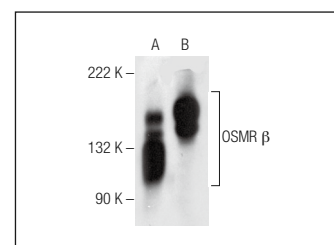
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  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-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  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



OSMR  $\beta$  (C-7): sc-376380. Western blot analysis of OSMR  $\beta$  expression in EOC 20 (A) and Sol8 (B) whole cell lysates.



OSMR  $\beta$  (C-7): sc-376380. Western blot analysis of OSMR  $\beta$  expression in NIH/3T3 (A) and EOC 20 (B) whole cell lysates.

## SELECT PRODUCT CITATIONS

1. Walker, E.C., et al. 2016. Murine oncostatin M acts via leukemia inhibitory factor receptor to phosphorylate signal transducer and activator of transcription 3 (Stat3) but not Stat1, an effect that protects bone mass. *J. Biol. Chem.* 291: 21703-21716.

## 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.