

# OSMR $\beta$ (D-10): sc-271695

## 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

- 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.
- 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.
- 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.

## CHROMOSOMAL LOCATION

Genetic locus: OSMR (human) mapping to 5p13.1; Osmr (mouse) mapping to 15 A1.

## SOURCE

OSMR  $\beta$  (D-10) is a mouse monoclonal antibody raised against amino acids 780-979 mapping at the C-terminus of OSMR  $\beta$  of human 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.

OSMR  $\beta$  (D-10) is available conjugated to agarose (sc-271695 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-271695 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271695 PE), fluorescein (sc-271695 FITC), Alexa Fluor<sup>®</sup> 488 (sc-271695 AF488), Alexa Fluor<sup>®</sup> 546 (sc-271695 AF546), Alexa Fluor<sup>®</sup> 594 (sc-271695 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-271695 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-271695 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-271695 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

## RESEARCH USE

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

## APPLICATIONS

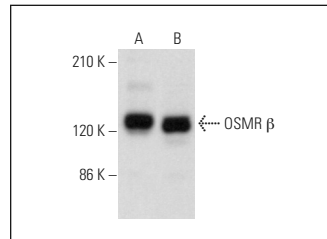
OSMR  $\beta$  (D-10) is recommended for detection of OSMR  $\beta$  of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting 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 (h): sc-40068, OSMR  $\beta$  siRNA (m): sc-40069, OSMR  $\beta$  shRNA Plasmid (h): sc-40068-SH, OSMR  $\beta$  shRNA Plasmid (m): sc-40069-SH, OSMR  $\beta$  shRNA (h) Lentiviral Particles: sc-40068-V and OSMR  $\beta$  shRNA (m) Lentiviral Particles: sc-40069-V.

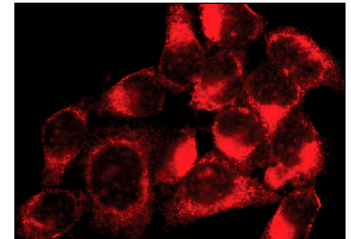
Molecular Weight of OSMR  $\beta$ : 180 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, IMR-32 cell lysate: sc-2409 or Neuro-2A whole cell lysate: sc-364185.

## DATA



OSMR  $\beta$  (D-10): sc-271695. Western blot analysis of OSMR  $\beta$  expression in IMR-32 (A) and Neuro-2A (B) whole cell lysates.



OSMR  $\beta$  (D-10): sc-271695. Immunofluorescence staining of methanol-fixed HeLa cells showing membrane and cytoplasmic localization.

## SELECT PRODUCT CITATIONS

- Takata, F., et al. 2019. Oncostatin-M-reactive pericytes aggravate blood-brain barrier dysfunction by activating JAK/Stat3 signaling *in vitro*. *Neuroscience* 422: 12-20.
- Parashar, D., et al. 2019. miRNA551b-3p activates an oncostatin signaling module for the progression of triple-negative breast cancer. *Cell Rep.* 29: 4389-4406.e10.
- Sharanek, A., et al. 2020. OSMR controls glioma stem cell respiration and confers resistance of glioblastoma to ionizing radiation. *Nat. Commun.* 11: 4116.
- Mashimo, K., et al. 2021. Role of oncostatin M in the pathogenesis of vernal keratoconjunctivitis: focus on tissue remodeling. *Jpn. J. Ophthalmol.* 65: 144-153.

## STORAGE

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

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