

OSMR β (AN-U2): sc-21797

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 β (oncostatin M receptor β), 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 β exists as a hetero-dimer that interacts with interleukins and is able to transduce OSM-induced signaling events. Defects in the gene encoding OSMR β 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 α , and oncostatin M receptor β 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 β) in human fetal and adult ovaries. *Fertil. Steril.* 83: 1188-1196.

CHROMOSOMAL LOCATION

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

SOURCE

OSMR β (AN-U2) is a mouse monoclonal antibody raised against OSMR β -transfected COS cells of human origin.

RESEARCH USE

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

PRODUCT

Each vial contains 200 μ g IgG κ light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

OSMR β (AN-U2) is available conjugated to either phycoerythrin (sc-21797 PE) or fluorescein (sc-21797 FITC), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM.

APPLICATIONS

OSMR β (AN-U2) is recommended for detection of OSMR β of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)] and flow cytometry (1 μ g per 1 x 10⁶ cells).

Suitable for use as control antibody for OSMR β siRNA (h): sc-40068, OSMR β siRNA (m): sc-40069, OSMR β shRNA Plasmid (h): sc-40068-SH, OSMR β shRNA Plasmid (m): sc-40069-SH, OSMR β shRNA (h) Lentiviral Particles: sc-40068-V and OSMR β shRNA (m) Lentiviral Particles: sc-40069-V.

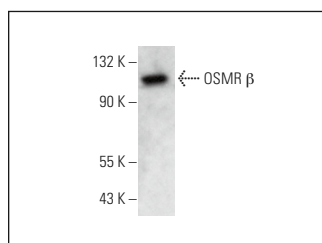
Molecular Weight of OSMR β : 180 kDa.

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

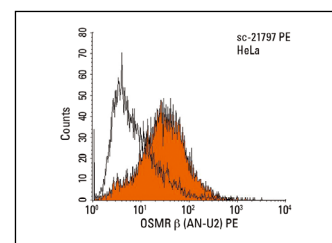
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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).

DATA



OSMR β (AN-U2): sc-21797. Western blot analysis of OSMR β expression in Neuro-2A whole cell lysate.



OSMR β (AN-U2) PE: sc-21797 PE. FCM analysis of HeLa cells. Black line histogram represents the isotype control, normal mouse IgG κ -PE: sc-2866.

SELECT PRODUCT CITATIONS

1. Hoermann, G., et al. 2012. Identification of oncostatin M as a JAK2 V617F-dependent amplifier of cytokine production and bone marrow remodeling in myeloproliferative neoplasms. *FASEB J.* 26: 894-906.

STORAGE

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