SANTA CRUZ BIOTECHNOLOGY, INC.

OSM (E-4): sc-365136

BACKGROUND

Oncostatin M (OSM) is a glycoprotein that was originally isolated from the conditioned medium of U-937 human histiocytic leukemia cells that had been induced to differentiate into macrophage-like cells by treatment with phorbol 12-myristate 13 acetate. OSM inhibits the growth of a broad range of human tumor cell lines, but does not influence the growth of normal human fibroblasts. High-affinity binding sites for OSM have been detected on normal and tumor cells, and a receptor has been identified by chemical cross-linking studies. 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.

REFERENCES

1. Zarling, J.M., et al. 1986. Oncostatin M: a growth regulator produced by differentiated histiocytic lymphoma cells. Proc. Natl. Acad. Sci. USA 83: 9739-9743.
2. Brown, T.J., et al. 1987. Purification and characterization of cytostatic lymphokines produced by activated human T lymphocytes. J. Immunol. 139: 2977-2983.
3. Malik, N., et al. 1989. Molecular cloning, sequence analysis, and functional expression of a novel growth regulator, oncostatin M. Mol. Cell. Biol. 9: 2847-2853.
4. Linsley, P.S., et al. 1989. Identification and characterization of cellular receptors for the growth regulator, oncostatin M. J. Biol. Chem. 264: 4282-4289.
5. Horn, D., et al. 1990. Regulation of cell growth by recombinant oncostatin M. Growth Factors 2: 157-165.
6. Rose, T.M., et al. 1991. Oncostatin M is a member of a cytokine family that includes leukemia-inhibitory factor, granulocyte colony-stimulating factor, and interleukin 6. Proc. Natl. Acad. Sci. USA 88: 8641-8645.

CHROMOSOMAL LOCATION

Genetic locus: OSM (human) mapping to 22q12.2; Osm (mouse) mapping to 11 A1.

SOURCE

OSM (E-4) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 3-25 within the N-terminus of OSM of human origin.

PRODUCT

Each vial contains 200 µg IgG_3 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-365136 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

OSM (E-4) is recommended for detection of OSM of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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 OSM siRNA (h): sc-39689, OSM siRNA (m): sc-39690, OSM shRNA Plasmid (h): sc-39689-SH, OSM shRNA Plasmid (m): sc-39690-SH, OSM shRNA (h) Lentiviral Particles: sc-39689-V and OSM shRNA (m) Lentiviral Particles: sc-39690-V.

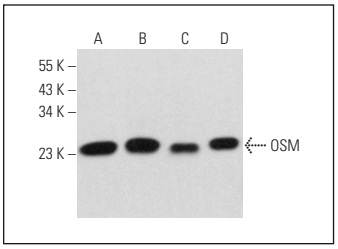
Molecular Weight of OSM: 28 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, MEG-01 cell lysate: sc-2283 or CCRF-CEM cell lysate: sc-2225.

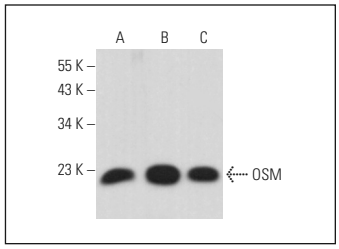
RECOMMENDED SUPPORT REAGENTS

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



OSM (E-4): sc-365136. Western blot analysis of OSM expression in Jurkat (**A**), MEG-01 (**B**), HL-60 (**C**) and CCRF-CEM (**D**) whole cell lysates.



OSM (E-4): sc-365136. Western blot analysis of OSM expression in Jurkat (**A**), AMJ2-C8 (**B**) and BYDP (**C**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Wu, R., et al. 2016. Endothelin-1 induces oncostatin M expression in osteoarthritis osteoblasts by *trans*-activating the oncostatin M gene promoter via Ets-1. Mol. Med. Rep. 13: 3559-3566.

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.