

OSM (A-9): sc-374039



The Power to Question

BACKGROUND

Oncostatin M (OSM) is a glycoprotein that was originally isolated from the conditioned medium of U937 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.

CHROMOSOMAL LOCATION

Genetic locus: *Osm* (mouse) mapping to 11 A1.

SOURCE

OSM (A-9) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 65-96 near the N-terminus of OSM of mouse origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

OSM (A-9) is available conjugated to agarose (sc-374039 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-374039 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-374039 PE), fluorescein (sc-374039 FITC), Alexa Fluor® 488 (sc-374039 AF488), Alexa Fluor® 546 (sc-374039 AF546), Alexa Fluor® 594 (sc-374039 AF594) or Alexa Fluor® 647 (sc-374039 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-374039 AF680) or Alexa Fluor® 790 (sc-374039 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-374039 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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APPLICATIONS

OSM (A-9) is recommended for detection of precursor and mature OSM of mouse and rat origin by Western Blotting (starting dilution 1:200, 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).

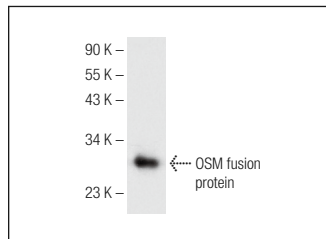
Suitable for use as control antibody for OSM siRNA (m): sc-39690, OSM shRNA Plasmid (m): sc-39690-SH and OSM shRNA (m) Lentiviral Particles: sc-39690-V.

Molecular Weight of OSM: 28 kDa.

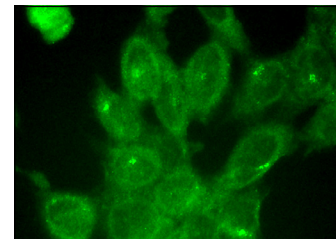
STORAGE

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

DATA



OSM (A-9): sc-374039. Western blot analysis of mouse recombinant OSM fusion protein.



OSM (A-9): sc-374039. Immunofluorescence staining of methanol-fixed NIH/3T3 cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Nogueira-Silva, C., et al. 2013. The role of glycoprotein 130 family of cytokines in fetal rat lung development. *PLoS ONE* 8: e67607.
2. Ikeda, S., et al. 2019. Yes-associated protein (YAP) facilitates pressure overload-induced dysfunction in the diabetic heart. *JACC Basic Transl. Sci.* 4: 611-622.
3. Jones, M.M., et al. 2020. *Treponema denticola* stimulates Oncostatin M cytokine release and *de novo* synthesis in neutrophils and macrophages. *J. Leukoc. Biol.* 108: 1527-1541.
4. Garcia, J.P., et al. 2021. Association between Oncostatin M expression and inflammatory phenotype in experimental arthritis models and osteoarthritis patients. *Cells* 10: 508.
5. Kang, M., et al. 2022. Extracellular vesicles from TNFα preconditioned MSCs: effects on immunomodulation and bone regeneration. *Front. Immunol.* 13: 878194.
6. Feng, Y., et al. 2023. OSMR deficiency aggravates pressure overload-induced cardiac hypertrophy by modulating macrophages and OSM/LIFR/STAT3 signalling. *J. Transl. Med.* 21: 290.
7. Mukherjee, A., et al. 2023. Carcinogen 4-nitroquinoline oxide (4-NQO) induces oncostatin-M (OSM) in esophageal cells. *In Vivo* 37: 506-518.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.