3050 Spruce Street, St. Louis, MO 63103 USA
Tel: (800) 521-8956 (314) 771-5765 Fax: (800) 325-5052 (314) 771-5757
email: techservice@sial.com sigma-aldrich.com

Product Information

Oncostatin M, mouse
recombinant, expressed in *E. coli*

Catalog Number **O1637**
Storage Temperature –20 °C

Synonym: OSM

Product Description

Oncostatin M (OSM) is a growth-regulating cytokine that affects a number of tumor and normal cells. OSM was first identified by its ability to inhibit the growth of A375 melanoma cells and other human tumor cells, but not inhibit the growth of normal human fibroblasts. Oncostatin M acts synergistically with TGF-β1 to inhibit the proliferation of A375 melanoma cells.[2] Oncostatin M is secreted by macrophages and activated T lymphocytes. It affects a wide variety of normal and tumor cells. It induces an increase in LDL receptor expression and LDL uptake by hepatoma cells.[3] OSM will induce cultured human endothelial cells to increase IL-6 production.[4] It activates synovial fibroblast-like cells to produce urokinase type plasminogen activator.[5] Oncostatin M, LIF, G-CSF, IL-6, and ciliary neurotrophic factor (CNTF) are structurally related members of the same cytokine family sharing similarities in their primary amino acid sequences, predicted secondary structure, and receptor components.[6]

Recombinant, mouse Oncostatin M (OSM) is produced from a DNA sequence encoding the mature, C-terminal truncated form of mouse OSM, corresponding to the Ala^{26}–Arg^{207} peptide.[1] It is lyophilized from a 0.2 μm filtered solution of phosphate buffered saline (PBS) with 1.25 mg bovine serum albumin (BSA) as carrier protein, and is aseptically filled.

Molecular mass: 21 kDa

Purity: ≥97% (SDS-PAGE)

EC_{50}: 0.25–1 ng/ml

The biological activity of recombinant, mouse Oncostatin M is measured in a cell proliferation assay using quiescent NIH/3T3 cells. The EC_{50} is defined as the effective concentration of growth factor that elicits a 50% increase in cell growth in a cell based bioassay.

Endotoxin: <0.1 ng/μg OSM

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

Preparation Instructions

Reconstitute the contents of the vial using 0.2 μm filtered PBS containing 0.1% HSA or BSA to a concentration ≥25 μg/ml.

Storage/Stability

Store the product at –20 °C.

After reconstitution, store at 2–8° C for a maximum of one month. For extended storage, freeze in working aliquots at –70 °C or –20 °C. Repeated freezing and thawing is not recommended.

References

1. Yoshimura, A. et al., The EMBO Journal, **15**, 1055 (1996).
2. Brown, T. et al., J. Immunol., **139**, 2977 (1987).
3. Grove, R. et al., J. Biol. Chem., **266**, 18194 (1991).
4. Brown, T. et al., J. Immunol., **147**, 2175 (1991).
5. Hamilton, J. et al., Biochem. Biophys. Res. Commun., **180**, 652 (1991).
6. Bazan, J., et al., Neuron, **7**, 197 (1991).

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