

**Product No. O-8507**  
**Oncostatin M (OSM)**  
Human, Recombinant  
Expressed in *E. coli*

Lot 083H0086

**Description**

Oncostatin M (OSM) is a growth-regulating cytokine affecting a number of tumor and normal cells. This material 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.<sup>1</sup> Oncostatin M acts synergistically with TGF- $\beta$ 1 to inhibit the proliferation of A375 melanoma cells.<sup>1</sup>

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.<sup>2</sup> Cultured human endothelial cells are induced to increase IL-6 production.<sup>3</sup> OSM activates synovial fibroblast-like cells to produce urokinase type plasminogen activator.<sup>4</sup>

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.<sup>6</sup>

**Performance Characteristics**

OSM is tested in culture using human TF1 cells.<sup>7,8</sup> One unit is defined as the amount of cytokine required to induce half-maximal incorporation of <sup>3</sup>H-thymidine.

**Storage**

Prior to reconstitution, store vial below 0°C. After reconstitution the product should be stored in working aliquots at -70°C. Storage in "frost-free" freezers and repeated freezing and thawing is **not** recommended.

**Product Information**

Mass/vial:	10 $\mu$ g
Purity:	$\geq$ 98% by SDS-PAGE
Specific Activity:	3 x 10 <sup>6</sup> Units/mg
Activity/vial:	30,000 Units/vial
Lyophilization Buffer:	None (dH <sub>2</sub> O)
Carrier Protein:	None
Preservatives:	None
Endotoxin	0.002 ng/ $\mu$ g Oncostatin M
Bioburden:	0 CFU/ml

**Reconstitution and Use**

To prepare a stock solution, reconstitute the vial contents in 0.1 - 0.5 ml of buffered saline or tissue culture media containing 0.1 - 1.0% BSA or 1 - 10% serum that is sterile-filtered. The stock solution should be further diluted as needed for the planned application. The working concentration of OSM is in the range of 0.6 - 60 ng/ml.

**References**

1. Brown T., et al., *J. Immunol.*, **139**, 2977 (1987).
2. Grove, R., et al., *J. Biol. Chem.*, **266**, 18194 (1991).
3. Brown, T., et al., *J. Immunol.*, **147**, 2175 (1991).
4. Hamilton, J., et al., *Biochem. Biophys. Res. Commun.*, **180**, 652 (1991).
5. Rose, T., and Bruce, A., *Proc. Nat. Acad. Sci. USA*, **88**, 8641 (1991).
6. Bazan, J., et al., *Neuron*, **7**, 197 (1991).
7. Kitamura, T., *J. Cell. Physiol.*, **14**, 323 (1989).
8. Kuwaki, T., et al., *Biochem. Biophys. Res. Commun.*, **161**, 16 (1989).

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