



## Product Information

### ANTI-MOUSE ONCOSTATIN M (OSM)

Developed in Goat  
Affinity Isolated Antiserum

Product Number **O 1009**

#### Product Description

Anti-Mouse Oncostatin M (OSM) was developed in goat using recombinant, mouse OSM, expressed in *E. coli*, as the immunogen. Affinity isolated antigen specific antibody is obtained from goat anti-mouse oncostatin M antiserum by immunospecific purification, which removes essentially all goat serum proteins, including immunoglobulins, which do not specifically bind to mouse oncostatin M. Goat Anti-Mouse OSM is provided 0.2  $\mu$ m filtered and lyophilized from phosphate buffered saline, (PBS) pH 7.4, to which no preservatives have been added.

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 does not inhibit the growth of normal human fibroblasts.<sup>1</sup> Recombinant human OSM is produced from a DNA sequence encoding the mature 196 amino acid residues of human OSM. 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> OSM will induce cultured human endothelial cells to increase IL-6 production.<sup>3</sup> It 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>

#### Preparation Instructions

To one vial of lyophilized powder, add 1 ml of 0.2  $\mu$ m filtered PBS to produce a 100  $\mu$ g/ml stock solution of Anti-Mouse OSM. If aseptic technique is used, no further filtration should be needed for use in cell culture environments.

#### Storage/Stability

Prior to reconstitution, store at  $-20^{\circ}\text{C}$ . The reconstituted product may be stored at  $2-8^{\circ}\text{C}$  for a maximum of one month. For prolonged storage, freeze in working aliquots at  $-20^{\circ}\text{C}$ . Avoid repeated freezing and thawing.

#### Product Profile

Anti-Mouse OSM is tested for its ability to neutralize the biological activity of rmOSM on the NIH-3T3 cell line. The  $\text{ND}_{50}$  of the antibody is defined as the concentration of antibody resulting in a one-half maximal inhibition of bioactivity of rmOSM that is present at a concentration just high enough to elicit a maximum response. In this bioassay, 15 ng/ml rmOSM was pre-mixed with various dilutions of the antibody for 1 hour at  $37^{\circ}\text{C}$ . The antigen-antibody mixture was then added to quiescent confluent cultures of NIH-3T3 cells in DMEM with 2% bovine plasma-derived serum in a 96-well plate. The assay mixture was incubated at  $37^{\circ}\text{C}$  for 24 hours in a humidified  $\text{CO}_2$  incubator.  $^3\text{H}$ -thymidine was added during the final 4 hour incubation. The cells were harvested and  $^3\text{H}$ -thymidine incorporated into DNA was measured.

The antibody may also be used in immunoblotting and ELISA. By ELISA and immunoblotting, the antibody shows < 2% cross-reactivity with recombinant human OSM. In addition, the antibody does not cross-react with other cytokines tested.\*

## 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., et al., Proc. Natl. Acad. Sci. USA, **88**, 8641 (1991).
6. Bazan, J., et al., Neuron, **7**, 197 (1991).

\* rhANG, rhAnnexin V, rhAR, rhB7-1, rhB7-2, rmB7-2, rhBTC, rh $\beta$ -NGF, rhBDNF, rmC10, rhCD4, rhCD8, rhCD28, rhCNTF, rhCNTF sR, rrCNTF, rhEGF, rhENA-78, rhEotaxin, rmEotaxin, rhEPO, rhEPO R, rhFGFa, rhFGFb, rhFGF-4, rhFGF-5, rhFGF-6, rhFGF-7, rhFGF-9, rhFlk2/Flt3, rhG-CSF, rhG-CSF R $\alpha$ , rmG-CSF, rhGDNF, rrGDNF, rhGM-CSF, rhGM-CSF R $\alpha$ , rmGM-CSF, rhGRO $\alpha$ , rhGRO $\beta$ , rhGRO $\gamma$ , rhHB-EGF, rhHRG- $\alpha$ , rhHGF, rhI-309, rhIFN- $\gamma$ , rhIFN- $\gamma$ , rhIGF-I, rhIGF-I R, rhIGF-II, rhIL-1 $\alpha$ , rhIL-1 RI, rhIL-1 RII, rhIL-1 $\alpha$ , rhIL-1 $\beta$ , rhIL-1 $\beta$ , rhIL-1 ra, rhIL-1 ra, rhIL-2, rhIL-2 sR $\alpha$ , rhIL-2 sR $\beta$ , rhIL-2 sR $\gamma$ , rhIL-2, rhIL-2, rhIL-3, rhIL-3 sR $\alpha$ , rhIL-3, rhIL-4, rhIL-4 sR, rhIL-4, rhIL-4, rhIL-5, rhIL-5 sR $\alpha$ , rhIL-5, rhIL-6, rhIL-6 sR, rhIL-6, rhIL-7, rhIL-7 R, rhIL-7, rhIL-8, rhIL-9, rhIL-9 sR, rhIL-9, rhIL-10, rhIL-10 sR, rhIL-10, rhIL-10 sR, rhIL-11, rhIL-11, rhIL-12, rhIL-12, rhIL-13, rhIL-13, rhIL-15, rhIL-16, rhIL-17, rhIP-10, rhJAK-1, rhJAK-2, rhJE, rhKC, rhLIF, rhLIF R, rhLIF, rhLymphotactin, rhM-CSF, rhM-CSF, rhMCP-1, rhMCP-1 R, rhMCP-2, rhMCP-3, rhMidkine, rhMIF, rhMIG, rhMIP-1 $\alpha$ , rhMIP-1 $\alpha$ , rhMIP-1 $\beta$ , rhMIP-1 $\beta$ , rhMIP-2, rhNT-3, rhNT-4, rhOB, rhPD-ECGF, hPDGF, pPDGF, rhPDGF-AA, rhPDGF-AB, rhPDGF-BB, rhPDGF R $\alpha$ , rhPIGF, rhPTN, rhRANTES, rhRANTES, rhSCF, rhSCF, rhsgp130, rhSLPI, rhSTAT-1, rhSTAT-4, hTfR, rhTGF- $\alpha$ , rhTGF- $\beta$ 1, rhTGF- $\beta$ 2, rhTGF- $\beta$ 3, rhTGF- $\beta$ 5, rhLAP (TGF- $\beta$ 1), rhLatent TGF- $\beta$ 1, rhTGF- $\beta$  sRII, rhTGF- $\beta$  sRIII, rhTNF- $\alpha$ , rhTNF- $\alpha$ , rrTNF- $\alpha$ , rhTNF- $\beta$ , rhTNF RI, rhTNF RII, rhTPO, rhTPO, rhTyk-2, rhVEGF, rhVEGF/PiGF, rhVEGF.

KMR/MAM 12/01

Sigma brand products are sold through Sigma-Aldrich, Inc.

Sigma-Aldrich, Inc. warrants that its products conform to the information contained in this and other Sigma-Aldrich publications. Purchaser must determine the suitability of the product(s) for their particular use. Additional terms and conditions may apply. Please see reverse side of the invoice or packing slip.