

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Oncostatin M/OSM in direct ELISAs. In direct ELISAs, no cross-reactivity with recombinant mouse Oncostatin M, recombinant human (rh) CLC, rhCNTF, rhCardiotrophin-1, rhIL-6, rhIL-11, or rhLIF is observed.
Source	Monoclonal Mouse IgG _{2A} Clone # 17022
Purification	Protein A or G purified from ascites
Immunogen	<i>E. coli</i> -derived recombinant human Oncostatin M/OSM Ala26-Arg221 Accession # P13725
Conjugate	Alexa Fluor 647 Excitation Wavelength: 650 nm Emission Wavelength: 668 nm
Formulation	Supplied 0.2 mg/mL in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details. *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

	Recommended Concentration	Sample
Intracellular Staining by Flow Cytometry	0.25-1 µg/10 ⁶ cells	Human monocyte-derived dendritic cells, fixed with paraformaldehyde and permeabilized with saponin

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. <ul style="list-style-type: none"> 12 months from date of receipt, 2 to 8 °C as supplied.

BACKGROUND

Oncostatin M (OSM) is a cytokine originally isolated from medium conditioned by PMA-treated U-937 human histiocytic leukemia cells based on its ability to inhibit growth of A375 melanoma cells. The human OSM cDNA encodes a 252 amino acid pre-pro-OSM polypeptide with a 25 residue hydrophobic signal peptide and a hydrophilic C-terminal domain that are proteolytically processed to generate the 196 residue mature form of OSM. Although both mature and pro-OSM are equally active in radio-receptor assays, the mature OSM is 5- to 60-fold more active in growth inhibition assays. Thus, proteolytic processing of the pro-OSM peptide may be important in regulating the *in vivo* activities of OSM.

OSM is a pleiotropic cytokine that initiates its biological activities by binding to specific cell surface receptors. The biological activity of human OSM is mediated either by the LIF/OSM receptor complex composed of gp130 and LIF R α or by a human OSM specific receptor composed of gp130 and OSM R α . The gp130, a signal transducing component (β subunit) of the IL-6, LIF and CNTF receptor complexes, was identified as a low-affinity OSM receptor that does not transduce OSM signals. The low affinity LIF receptor (LIF R, a gp130-related protein) has been identified to be a component of a high-affinity OSM receptor that will transduce OSM signals. Besides its growth inhibitory activities on human A375 melanoma and mouse M1 myeloid leukemic cells, as well as on other solid tumor cells, OSM also has growth stimulatory activities on normal fibroblasts, AIDS-Kaposi's sarcoma cells, and a human erythroleukemia cell line, TF-1. Other OSM-mediated activities reported to date include: stimulation of plasminogen activator activity in cultured bovine aortic endothelial cells; regulation of IL-6 expression in human endothelial cells; and stimulation of LDL uptake and up-regulation of cell surface LDL receptors in HepG2 cells.

PRODUCT SPECIFIC NOTICES

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