

GM-CSF active protein

Human GM-CSF

CATALOG # AAA79138	HOST Insect Cells
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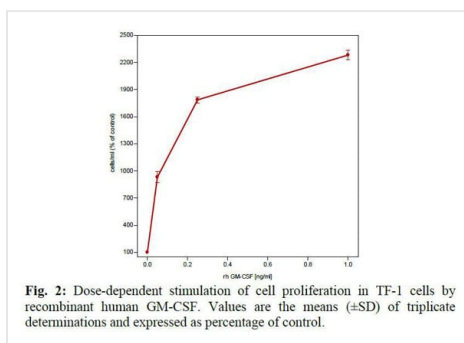
PRODUCT SYNONYMS

GM-CSF; Human GM-CSF; Recombinant Human Granulocyte Macrophage Colony-Stimulating Factor (GM-CSF); Colony-stimulating factor; GM-CSF active protein

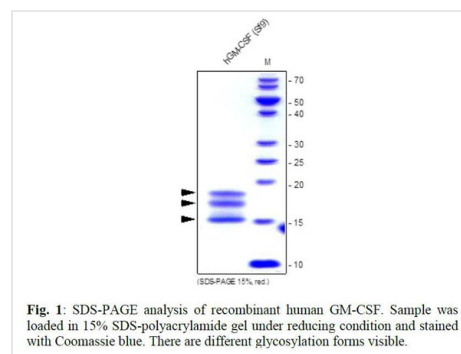
PRODUCT SPECIFICATIONS

Host	Insect Cells
Purity/Purification	> 98% by SDS-PAGE & silver stain
Form/Format	Lyophilized; PBS
Sequence Positions	APARSPSPSTQPWEHVNAIQEARRLLNLSRDTAEMNETVEISEMFDLQEP TCLQTRLELYKQGLRGLTKLKGPLTMMASHYKQHCPPTPETSCATQIITFE SFKENLKDFLLVIPFDCWEPVQETRHHHHHH
Sequence	N-Terminal Sequence:M APARSPST
N Terminal Sequence	MAPARSPST
Length (aa)	135
Reconstitution	The lyophilized rh GM-CSF is soluble in water and most aqueous buffers and can be reconstituted in water to a concentration of 0.1 mg/ml. This solution can be diluted into other buffered solutions or stored at -20°C for future use.
Biological Activity	Measured in a cell proliferation assay using TF-1 human erythroleukemic cells [Kitamura T et al, J Cell Physiol, 1989]. The ED50 for this effect is typically <0.1ng/ml corresponding to a specific activity of $\geq 1 \times 10^7$ units/mg.
Preparation and Storage	The lyophilized powder although stable at room temperature for 3 weeks, is best stored desiccated at -20°C. Reconstituted GM-CSF should be stored in working aliquots at -20°C. For long term storage it is recommended to add a carrier protein (0.1% HAS or BSA).

IMAGES



Application Data



Application Data

ADDITIONAL INFORMATION

Related Product Information for GM-CSF active protein	Granulocyte Macrophage Colony Stimulating Factor (GM-CSF), a 14.6 kDa protein consisting of 127 amino acid residues (Ala18-Glu144) and fused to a C-terminal His-tag (6x His), is a potent species specific stimulator of bone marrow cells and several other cell types. GM-CSF was initially characterized as a growth factor that can support the in vitro colony formation of granulocyte-macrophage progenitors. It is produced by a number of different cell types (including activated T cells, B cells, macrophages, mast cells, endothelial cells and fibroblasts) in response to cytokine or immune and inflammatory stimuli. Besides granulocyte-macrophage progenitors, GM-CSF is also a growth factor for erythroid, megakaryocyte and eosinophil progenitors. On mature hematopoietic cells, GM-CSF is a survival factor for and activates the effector functions of granulocytes, monocytes/macrophages and eosinophils. GM-CSF has also been reported to have a functional role on non-hematopoietic cells. It can induce human endothelial cells to migrate and proliferate. Additionally, GM-CSF can also stimulate the proliferation of a number of tumor cell lines, including osteogenic sarcoma, carcinoma and adenocarcinoma cell lines. GM-CSF is species specific and human GM-CSF has no biological effects on mouse cells. GM-CSF exerts its biological effects through binding to specific cell surface receptors. The high affinity receptors required for human GM-CSF signal transduction have been shown to be heterodimers consisting of a GM-CSF-specific alpha chain and a common beta chain that is shared by the high-affinity receptors for IL-3 and IL-5.
Product Categories/Family for GM-CSF active protein	Cytokines & Growth Factors
References	1. Martinez-Moczygomba and Huston (2003) J. Allergy Clin Immunol 112:653 2. Barreda et al, (2004) Dev Comp Immunol 28:509 3. Eksioglu et al, (2007) Exp Hematol 35:1163 4. Cao Y, (2007) J Clin Invest 117:2362 5. Fleetwood et al, (2005) Crit Rev Immunol 25:405 6. Diederichs et al, (1991) Science 254:1779 7. Gough et al, (1984) Nature 309:763

NCBI AND UNIPROT INFORMATION

NCBI GI #	27437030
NCBI GeneID	1437
NCBI Accession #	NP_0000749
NCBI GenBank Nucleotide #	NM_000758
UniProt Accession #	P04141 ; Q14CE8 ; Q2VPI8 ; Q8NFI6
Molecular Weight	~15.0 - 18.0 kDa
NCBI Official Full Name	granulocyte-macrophage colony-stimulating factor
NCBI Official Synonym Full Names	colony stimulating factor 2 (granulocyte-macrophage)
NCBI Official Symbol	CSF2
NCBI Official Synonym Symbols	GMCSF
NCBI Protein Information	granulocyte-macrophage colony-stimulating factor; CSF; molgramostin; sargramostim
UniProt Protein Name	Granulocyte-macrophage colony-stimulating factor
UniProt Gene Name	CSF2
UniProt Synonym Gene Names	GMCSF; GM-CSF; CSF
UniProt Entry Name	CSF2_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.