

Recombinant Human CSF2, His-tagged

Cat. No. CSF2-87H Lot. No. (See product label)

SPECIFICATION

Product Overview	Recombinant Human GM-CSF produced in insect cells is a single, glycosylated, polypeptide chain containing 127 amino acids and having a molecular mass of 14477 Dalton. GM-CSF is fused to a C-terminal His -tag (6x His) and purified by proprietary chromatographic techniques.
Species	Human
Source	Insect Cells
Description	GM-CSF is a cytokine that controls the production, differentiation, and function of granulocytes and macrophages. The active form of the protein is found extracellularly as a homodimer. This gene has been localized to a cluster of related genes at chromosome region 5q31, which is known to be associated with interstitial deletions in the 5q- syndrome and acute myelogenous leukemia. Other genes in the cluster include those encoding interleukins 4, 5, and 13. GM-CSF stimulates the growth and differentiation of hematopoietic precursor cells from various lineages, including granulocytes, macrophages, eosinophils and erythrocytes.
Amino Acid Sequence	The sequence of the first five N-terminal amino acids was determined and was found to be Ala-Pro-Ala-Arg-Ser. N-terminal methionine has been completely removed enzymatically.
Physical Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
Purity	Greater than 98.0% as determined by: (a) Analysis by RP-HPLC. (c) Analysis by

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	SDS-PAGE.
Formulation	The protein was lyophilized with no additives.
Solubility	It is recommended to reconstitute the lyophilized Granulocyte Macrophage Colony Stimulating Factor in sterile 18 MΩ-cm H ₂ O not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.
Specific Activity	The ED50 as determined by the dose-dependant stimulation of the proliferation of human TF-1 cells (human erythroleukemic indicator cell line) is < 0.1 ng/ml, corresponding to a Specific Activity of 1 x10 ⁷ IU/mg.
Protein Content	Protein quantitation was carried out by two independent methods: 1. UV spectroscopy at 280 nm using the absorbency value of 0.963 as the extinction coefficient for a 0.1% (1mg/ml) solution. This value is calculated by the PC GENE computer analysis program of protein sequence (IntelliGenetics). 2. Analysis by RP-HPLC, using a standard solution of GMCSF as a Reference Standard.
Stability	Lyophilized Granulocyte Macrophage Colony Stimulating Factor although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution GMCSF should be stored at 4°C between 2-7 days and for future use below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

GENE INFORMATION

Gene Name	CSF2 colony stimulating factor 2 (granulocyte-macrophage) [Homo sapiens]
Synonyms	CSF2; colony stimulating factor 2 (granulocyte-macrophage); GMCSF; MGC131935; MGC138897; colony stimulating factor 2; molgramostin; sargramostim; granulocyte-

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	macrophage colony stimulating factor; GM-CSF; Molgramostin; Sargramostim; Colony-stimulating factor
Gene ID	1437
mRNA Refseq	NM_000758
Protein Refseq	NP_000749
MIM	138960
UniProt ID	P04141
Chromosome Location	5q31.1
Pathway	Cytokine-cytokine receptor interaction; Fc epsilon RI signaling pathway; Hematopoietic cell lineage; Jak-STAT signaling pathway; Natural killer cell mediated cytotoxicity; T cell receptor signaling pathway
Function	cytokine activity; granulocyte macrophage colony-stimulating factor receptor binding; growth factor activity; protein binding

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on 2gmf

