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CSF2
Recombinant Human Granulocyte Macrophage Colony Stimulating Factor

Catalog No.	CRG100A	**Quantity:**	5 µg
	CRG100B		20 µg
	CRG100C		1.0 mg

Alternate Names: GMCSF, CSF, molgramostin, sargramostim, colony-stimulating factor, granulocyte-macrophage colony stimulating factor

Description: Granulocyte-Macrophage Colony Stimulating Factor (GM-CSF) 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. GM-CSF is a growth factor for granulocyte-macrophage, 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.

Recombinant Human GM-CSF is a single non-glycosylated polypeptide chain containing 128 amino acids.

Gene ID: 1437

UniProtKB: P04141

Source: *E. coli*

Molecular Weight: Monomer, 14.6 kDa (128 aa)

Formulation: Lyophilized from sterile filtered solution in 10 mM sodium phosphate, pH 7.5.

Purity: ≥95% by reducing and nonreducing SDS-PAGE

Endotoxin Level: ≤1 EU/µg

Biological Activity: The protein has full biological activity when compared to the standard. The ED_{50}, as determined by dose-dependent proliferation assay using human TF-1 cells is ≤200 pg/mL.

Specific Activity: ~1 x 10^7 U/mg Calibrated against recombinant human GM-CSF WHO International Standard (NIBSC code: 88/646).

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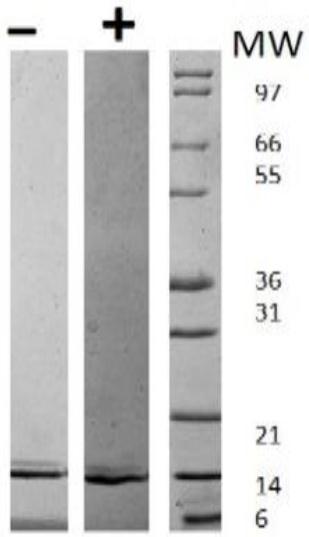
Amino Acid Sequence: MAPARSPSPS TQPWEHVNAI QEARRLLNLS RDTAAEMNET VEVISEMFDL QEPTCLQTRL ELYKQGLRGS LTKLKGPLTM MASHYKQHCP PTPETSCATQ IITFESFKEN LKDFLLVIPF DCWEPVQE

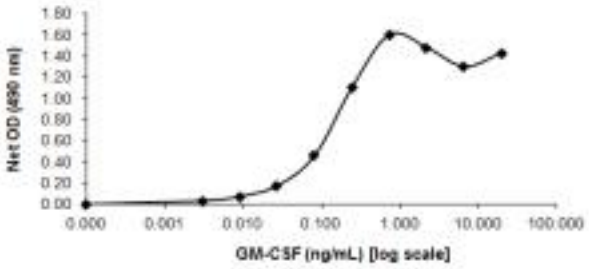
Reconstitution: **Centrifuge vial prior to opening.** Add sterile distilled water to a concentration of 0.1 mg/ml. **DO NOT VORTEX.** Allow several minutes for complete reconstitution. Further dilutions should be made in appropriate buffered solutions.

Storage & Stability: Lyophilized product is stable at room temperature for shipping purposes. Upon receipt, store desiccated at -20°C for up to 1 year.
Upon reconstitution, the preparation is stable for up to one month at 2-8°C. For long term storage, freeze in working aliquots and store at -20 to -80°C. For maximal stability, dilute to working aliquots in a 0.1% BSA solution. **Avoid repeated freeze-thaw cycles.**

Figure: 1 µg in each lane (-) non-reducing and (+) reducing conditions in a 4-20% Tris-Glycine gel, stained with Comassie Blue.



Human GM-CSF Induced Proliferation of TF-1 Cells



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