

## CSF2

# Recombinant Human Granulocyte Macrophage Colony Stimulating Factor Animal Free

<b>Catalog No.</b>	CRG100A-AF CRG100B-AF CRG100C-AF	<b>Quantity:</b>	5 µg 20 µg 1.0 mg
<b>Alternate Names:</b>	GMCSF, CSF, molgramostin, sargramostim, colony-stimulating factor, granulocyte-macrophage colony stimulating factor		
<b>Description:</b>	<p>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.</p> <p>Recombinant Human GM-CSF is a single non-glycosylated polypeptide chain containing 128 amino acids.</p>		
<b>Gene ID:</b>	1437		
<b>UniProtKB:</b>	P04141		
<b>Source:</b>	<i>E. coli</i>		
<b>Molecular Weight:</b>	Monomer, 14.6 kDa (128 aa)		
<b>Formulation:</b>	Lyophilized from sterile filtered solution in 10 mM sodium phosphate, pH 7.5.		
<b>Purity:</b>	≥95% by reducing and nonreducing SDS-PAGE		
<b>Endotoxin Level:</b>	≤1 EU/µg		
<b>Biological Activity:</b>	The protein has full biological activity when compared to the standard. The ED <sub>50</sub> , as determined by dose-dependent proliferation assay using human TF-1 cells is ≤200 pg/mL.		
<b>Specific Activity:</b>	~1 x 10 <sup>7</sup> U/mg Calibrated against recombinant human GM-CSF WHO International Standard (NIBSC code: 88/646)		
<b>Amino Acid Sequence:</b>	MAPARSPSPS TQPWEHVNAI QEARRLLNLS RDAAEMNET VEVISEMFDL QEPTCLQTRL ELYKQGLRGS LTKLKGPLTM MASHYKQHCP PTPETSCATQ IITFESFKEN LKDFLLVIPF DCWEPVQE		



**Reconstitution:**

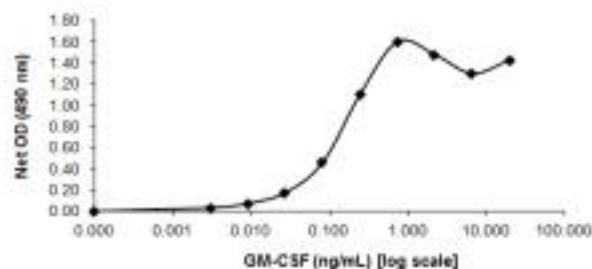
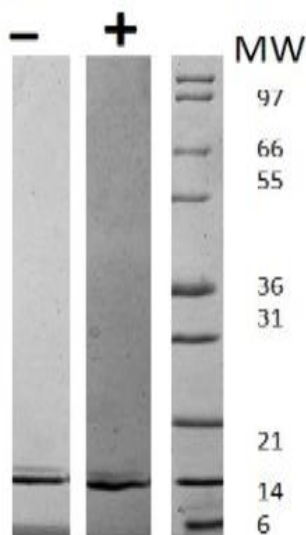
**Centrifuge vial prior to opening.** Add sterile distilled water to a concentration of 0.1 mg/ml. **DO NOT VORTEX.** Allow several minutes for complete reconstitution. Further dilutions should be made in appropriate buffered solutions.

**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



NOT FOR HUMAN USE. FOR RESEARCH ONLY. NOT FOR DIAGNOSTIC OR THERAPEUTIC USE.



**Cell Sciences®**  
65 Parker Street  
Unit 11  
Newburyport, MA 01950

Toll Free: 888-769-1246  
Phone: 978-572-1070  
Fax: 978-992-0298

E-mail: [info@cellsciences.com](mailto:info@cellsciences.com)  
Website: [www.cellsciences.com](http://www.cellsciences.com)