

**Recombinant Human Granulocyte Colony Stimulating Factor  
(rhG-CSF)  
Catalog Number: 102-02**

<b>Description</b>	G-CSF is a pleiotropic cytokine best known for its specific effects on the proliferation, differentiation, and activation of hematopoietic cells of the neutrophilic granulocyte lineage. It is produced mainly by monocytes and macrophages upon activation by endotoxin, TNF- $\alpha$ and IFN- $\gamma$ . Other cell types including fibroblasts, endothelial cells, astrocytes and bone marrow stromal cells can also secrete G-CSF after LPS, IL-1 or TNF- $\alpha$ activation. In addition, various carcinoma cell lines and myeloblastic leukemia cells can express G-CSF constitutively. In humans, two distinct cDNA clones for G-CSF, encoding 207 and 204 amino acid precursor proteins, have been isolated. Both proteins have a 30 amino acid signal peptide and have identical amino acid sequences except for a three amino acid insertion (deletion) at the 35th amino acid residue from the N-terminus of the mature protein. Human G-CSF is 73% identical at the amino acid level to murine G-CSF and the two proteins show species cross-reactivity.
<b>Synonyms</b>	CSF-3, MGI-1G, GM-CSF beta, Pluripoietin, Filgrastim, Lenograstim, G-CSF, MGC45931, GCSF, CSF3OS; C17orf33
<b>AA Sequence</b>	TPLGPASSLP QSFLKCLEQ VRKIQGDGAA LQEKLCATYK LCHPEELVLL GHSLGIPWAP LSSCPSQALQ LAGCLSQLHS GLFLYQGLLQ ALEGISPELG PTLDTLQLDV ADFATTIWQQ MEELGMAPAL QPTQGAMPAF ASAFQRRAGG VLVASHLQSF LEVSYRVLRLH LAQP
<b>Source</b>	<i>Escherichia coli</i>
<b>Molecular Weight</b>	Approximately 18.7 kDa, a single non-glycosylated polypeptide chain containing 174 amino acids.
<b>Purity</b>	>98% by SDS-PAGE and HPLC analyses.
<b>Biological Activity</b>	Fully biologically active. The ED <sub>50</sub> is < 0.1 ng/ml, corresponding to a specific activity of 1 x 10 <sup>8</sup> units/mg, as determined by murine NFS-60 indicator cell proliferation.
<b>Physical Appearance</b>	White lyophilized powder.
<b>Formulation</b>	Lyophilized from a 0.2 $\mu$ m filtered concentrated (1mg/ml) solution in 10mM sodium acetate buffer pH 4.0.
<b>Endotoxin</b>	< 1EU/ $\mu$ g of growth factor as determined by LAL method.
<b>Reconstitution</b>	Reconstitute in sterile distilled water containing 0.1% BSA to a concentration of 0.1-1.0 mg/mL.
<b>Storage</b>	Store at -20°C after receiving. Upon reconstitution, store at 2-8°C for up to one week. For maximal stability, aliquot and store at -20°C. Avoid repeated freeze/ thaw cycles.
<b>Usage</b>	This product is for research use only. It is not approved for use in humans, animals, or <i>in vitro</i> diagnostic procedures.