

## GMP Recombinant Human CSF3

Cat. No. CSF3-135H Lot. No. (See product label)

### SPECIFICATION

**Species** Human

**Source** E.coli

**Description**

Granulocyte Colony Stimulating Factor (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.

**Form**

Lyophilized from a 0.2  $\mu$ m filtered concentrated solution in 10 mM sodium acetate buffer, containing 5% trehalose, pH 4.0.

**Bio-activity**

The ED50 determined by a cell proliferation assay using murine NFS-60 cells is less than 0.1 ng/mL, corresponding to a specific activity of  $>1.0 \times 10^7$  IU/mg.

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<b>Molecular Mass</b>	Approximately 18.7 kDa, a single non-glycosylated polypeptide chain containing 174 amino acids.
<b>AA Sequence</b>	TPLGPASSLP QSFLKCLEQ VRKIQGDGAA LQEKLCATYK LCHPEELVLL GHSLGIPWAP LSSCPSQALQ LAGCLSQLHS GLFLYQGLLQ ALEGISPELG PTLDTLQLDV ADFATTIWQQ MEELGMAPAL QPTQGAMPAF ASAFQRRAGG VLVASHLQSF LEVSYRVLRH LAQP
<b>Endotoxin</b>	Less than 1 EU/μg of G-CSF as determined by LAL method.
<b>Purity</b>	>98% by SDS-PAGE and HPLC analyses.
<b>Usage</b>	This material is offered by Creative Biomart for research, laboratory or further evaluation purposes. FOR RESEARCH USE ONLY. NOT INTENDED FOR ANY ANIMAL OR HUMAN THERAP EUTIC OR DIAGNOSTIC USE.
<b>Storage Buffer</b>	This lyophilized preparation is stable at 2-8°C, but should be kept at -20°C for long term storage, preferably desiccated. Upon reconstitution, the preparation is stable for up to one week at 2-8°C. For maximal stability, apportion the reconstituted preparation into working aliquots and store at -20°C to -70°C. Avoid repeated freeze/thaw cycles.
<b>Reconstitution</b>	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1% BSA to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at< -20°c="" further="" dilutions="" should="" be="" made="" in="" appropriate="" buffered="">

## GENE INFORMATION

**Gene Name** CSF3 colony stimulating factor 3 (granulocyte) [ Homo sapiens ]

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<b>Official Symbol</b>	CSF3
<b>Synonyms</b>	CSF3; colony stimulating factor 3 (granulocyte); C17orf33, chromosome 17 open reading frame 33 , G CSF, GCSF; granulocyte colony-stimulating factor; filgrastim; granulocyte colony stimulating factor; lenograstim; MGC45931; pluripoietin; GCSF; CSF3OS; C17orf33;
<b>Gene ID</b>	1440
<b>mRNA Refseq</b>	NM_000759
<b>Protein Refseq</b>	NP_000750
<b>MIM</b>	138970
<b>UniProt ID</b>	P09919
<b>Chromosome Location</b>	17q11.2-q12
<b>Pathway</b>	Cytokine-cytokine receptor interaction, organism-specific biosystem; Cytokine-cytokine receptor interaction, conserved biosystem; Cytokines and Inflammatory Response, organism-specific biosystem; Hematopoietic cell lineage, organism-specific biosystem; Hematopoietic cell lineage, conserved biosystem; Jak-STAT signaling pathway, organism-specific biosystem; Jak-STAT signaling pathway, conserved biosystem;
<b>Function</b>	cytokine activity; cytokine activity; enzyme binding; granulocyte colony-stimulating factor receptor binding; growth factor activity;

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