

# Active Recombinant Human Colony Stimulating Factor 3 (Granulocyte)

**Cat. No.** CSF3-142H    **Lot. No.** (See product label)

## SPECIFICATION

<b>Product Overview</b>	Recombinant Human Colony Stimulating Factor 3 (Granulocyte) encoding the human Colony Stimulating Factor 3 (Granulocyte) protein sequence (containing the signal peptide sequence, and the mature G-CSF sequence) was expressed in modified <i>human 293 cells</i> .
<b>Species</b>	Human
<b>Source</b>	HEK293
<b>Description</b>	Granulocyte colony stimulating factor (G-CSF) is the primary extracellular regulator of granulopoiesis and regulates the production of neutrophils by stimulating proliferation and survival of specific bone marrow precursor cells and their differentiation into granulocytes. Neutrophils play a critical role in the defence against bacterial and fungal infections. G-CSF is produced by monocytes, macrophages, neutrophils, fibroblasts and endothelial cells and is capable of increasing the absolute number of circulating neutrophils and enhancing their antimicrobial function. Unlike GM-CSF, the activity of G-CSF is not species specific. Additionally, G-CSF production is inducible by cytokines including TNF-alpha, IL-1, GM-CSF, IL-17 and IL-4.
<b>Amino Acid Sequence</b>	TPLGPASSLPQSFLKCLEQVRKIQGDGAALQEKLCAATYKLCHEPEELVLLGHSLGIP WAPLSSCPSQALQLAGCLSLSGLFLYQGLLQALEGISPELGPTLDTLQLDVADFA TTIWQQMEELGMAPALQPTQGAMPAFASAFQRRAGGVLVASHLQSFLEVSRYRVLRL HLAQP.

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<b>Molecular Mass</b>	G-CSF migrates as a band between 15 and 20 kDa in SDS-PAGE. This compares with the predicted molecular mass of 18.7 kDa.
<b>pI</b>	G-CSF separates into a number of isoforms with a pI between 5.4 and 6.0 in 2D PAGE Due to post-translational modifications, in particular glycosylation.
<b>Purity</b>	>95%, as determined by SDS-PAGE and visualized by silver stain.
<b>Formulation</b>	When reconstituted in 0.5 ml sterile phosphate-buffered saline, the solution will contain 1% human serum albumin (HSA) and 10% trehalose.
<b>Reconstitution</b>	It is recommended that 0.5 ml of sterile phosphate-buffered saline be added to the vial.
<b>Storage</b>	Lyophilized products should be stored at 2 to 8°C. Following reconstitution short-term storage at 4°C is recommended, and longer-term storage of aliquots at -18 to -20°C. Repeated freeze thawing is not recommended.
<b>Activity</b>	The ED <sub>50</sub> of G-CSF is typically 0.01 - 0.03 ng/ml as measured in a cell proliferation assay using a murine myeloblastic M-NFS-60 cell line.

## GENE INFORMATION

<b>Gene Name</b>	CSF3 colony stimulating factor 3 (granulocyte) [ Homo sapiens ]
<b>Synonyms</b>	CSF3; colony stimulating factor 3 (granulocyte); GCSF; G-CSF; MGC45931; colony stimulating factor 3; filgrastim; lenograstim; pluripoietin; granulocyte colony stimulating factor; Granulocyte colony-stimulating factor; OTTHUMP00000164327
<b>Gene ID</b>	1440

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<b>mRNA Refseq</b>	<a href="#">NM_000759</a>
<b>Protein Refseq</b>	<a href="#">NP_000750</a>
<b>UniProt ID</b>	<a href="#">P09919</a>
<b>Chromosome Location</b>	q11.2-q12
<b>MIM</b>	<a href="#">138970</a>
<b>Pathway</b>	Cytokine-cytokine receptor interaction; opoietic cell lineage; Jak-STAT signaling pathway
<b>Function</b>	cytokine activity; enzyme binding; granulocyte colony-stimulating factor receptor binding; growth factor activity

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