

Active Recombinant Human Colony Stimulating Factor 3 (Granulocyte)

Cat. No. CSF3-470H Lot. No. (See product label)

SPECIFICATION

Product Overview

Recombinant Human CSF3 was produced in *Pseudomonas fluorescens*. MW = 18.8 kDa.

Species

Human

Source

Pseudomonas Fluorescens

Description

G-CSF is a cytokine that controls the production, differentiation, and function of granulocytes. The active protein is produced extracellularly by macrophages activated by endotoxin (LPS), by monocytes activated by TNF- α with IFN γ , by fibroblasts and endothelial cells activated by IL-1 or TNF- α , and by bone marrow stromal cells activated by IL-1 or LPS. Granulocyte/macrophage colony-stimulating factors are cytokines that act in hematopoiesis by controlling the production, differentiation, and function of 2 related white cell populations of the blood, the granulocytes and the monocytes-macrophages. In vitro, G-CSF stimulates growth, differentiation and functions of cells from the neutrophil lineage. It also has blast cell growth factor activity and can synergize with IL3 to shorten the G_0 period of early hematopoietic progenitors. Consistent with its in vitro functions, GCSF has been found to play important roles in defense against infection, in inflammation and repair, and in the maintenance of steady state hematopoiesis.

N-terminal Sequence

Met-Thr-Pro-Leu-Gly

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Purity	> 97%, by SDS-CGE under reducing conditions.
Endotoxin Level	< 1.0 EU per 1 µg of the protein by the LAL method.
Activity	Measured in a cell proliferation assay using NFS-60 mouse myeloblast cells. The ED50 for this effect is typically 10-60 pg/ml.
Formulation	Lyophilized in acetate buffer, pH 4.0, containing sucrose and glycine.
Storage	Store at 2-8°C upon receipt, preferably desiccated. Reconstitute aseptically in sterile 20 mM acetic acid, pH 4.0, to a G-CSF concentration of 0.15-0.25 mg/mL. Store reconstituted G-CSF at -20°C (not in a frost-free freezer). Avoid repeated freeze-thaw.

GENE INFORMATION

Gene Name	CSF3 colony stimulating factor 3 (granulocyte) [Homo sapiens]
Synonyms	CSF3; colony stimulating factor 3 (granulocyte); GCSF; G-CSF; MGC45931; colony stimulating factor 3; filgrastim; lenograstim; pluripoietin; granulocyte colony stimulating factor; Filgrastim; Lenograstim; OTTHUMP00000164327; Pluripoietin
Gene ID	1440
mRNA Refseq	NM_000759
Protein Refseq	NP_000750
MIM	138970
UniProt ID	P09919

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Chromosome Location	17q11.2-q12
Pathway	Cytokine-cytokine receptor interaction; Hematopoietic cell lineage; Jak-STAT signaling pathway
Function	cytokine activity; enzyme binding; growth factor activity; granulocyte colony-stimulating factor receptor binding
Crystal structure of 3 molecules of human G-CSF. From PDB 1rhg.	