

Active Recombinant Human CSF3, His-tagged

Cat. No. CSF3-21H **Lot. No.** (See product label)

SPECIFICATION

Product Overview Recombinant Human CSF3 was purified from the endosperm tissue of barley grain (*Hordeum vulgare*). Recombinant human G-CSF is a 18.7 kDa protein containing 174 amino acid residues.

Species Human

Source Barley Grain

Description Granulocyte Colony-Stimulating Factor (G-CSF , filgrastim, pegfilgrastim or lenograstim) is a hematopoietic growth factor that stimulates the proliferation and differentiation of hematopoietic progenitor cells committed to the neutrophil/granulocyte lineage, in a dose-dependent manner. It is produced by a variety of cells including macrophages, monocytes, fibroblasts, endothelial cells and bone marrow stroma in response to specific stimulation by f.ex. endotoxin, TNF-alpha and IFN-gamma. Clinical applications of G-CSF include treatment of leukopenia following cancer therapy and bone marrow transplantation. Human and murine G-CSF are cross-species reactive.

Form Sterile filtered through a 0.2 µm filter. Lyophilized from PBS, pH 7.2

Bio-activity Recombinant human G-CSF was determined by its dose-dependent effects on the proliferation of M-NFS-60 cells. The ED50 value is typically < 0.1 ng/ml corresponding to specific activity > 1 x 10⁷ U/mg. Optimal concentration should be determined for specific applications and cell lines.

 Tel: 1-631-559-9269 1-516-512-3133

 Email: info@creative-biomart.com  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

Molecular Mass	Recombinant human G-CSF contains 174 amino acids and a 16 a.a. Histidine-based tag for a total length of 190 a.a. and has a predicted molecular mass of 20.8 kDa.
Endotoxin	Endotoxin level is less than 0.005ng per µg of product (0.05EU/µg).
Purity	Greater than 95% by SDS-PAGE gel analysis.
Storage	The lyophilized protein, though stable at room temperature for few weeks, is best stored at -20°C. Reconstituted protein should be used immediately or stored in working aliquots at -20°C. Avoid repeated freeze-thaw cycles.
Reconstitution	Always centrifuge the vial before opening. It is recommended to reconstitute the lyophilized protein in sterile water to a concentration of no less than 100 µg/ml. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA).

GENE INFORMATION

Gene Name	CSF3 colony stimulating factor 3 (granulocyte) [Homo sapiens]
Official Symbol	CSF3
Synonyms	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; pluripoiectin; GCSF; CSF3OS; C17orf33;
Gene ID	1440
mRNA Refseq	NM_000759
Protein Refseq	NP_000750

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MIM	138970
UniProt ID	P09919
Chromosome Location	17q11.2-q12
Pathway	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;
Function	cytokine activity; cytokine activity; enzyme binding; granulocyte colony-stimulating factor receptor binding; growth factor activity;

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