

Recombinant Human Granulocyte Colony Stimulating Factor

Human, Recombinant (CSF3)

Expressed in *E. coli*

Cat. No. CRP0802

Lot. No. (See product label)

PRODUCT INFORMATION

Description: Granulocyte colony-stimulating factor (G-CSF or GCSF) is a colony-stimulating factor hormone. It is a glycoprotein, growth factor or cytokine produced by a number of different tissues to stimulate the bone marrow to produce granulocytes and stem cells. G-CSF then stimulates the bone marrow to release them into the blood. It also stimulates the survival, proliferation, differentiation, and function of neutrophil precursors and mature neutrophils. G-CSF is also known as colony-stimulating factor 3 (CSF 3).

Amino-Acid Sequence:175 aa (The sequence of the first fifteen N-terminal amino acids was determined and was found to be Met-Thr-Pro-Leu-Gly-Pro-Ala-Ser-Ser-Leu-Pro-Gln-Ser-Phe-Leu-leu.) non-glycosylated

M. W. : 18,800 Da

Recombinant: Expressed in *E. coli*

Purity: >95% as determined by SDS-PAGE and SEC-HPLC.

Isoelectric Point: the main zone between 5.8~6.6 analysis by IEF.

UV scan: the maximal absorption wave is 278+/- 3nm.

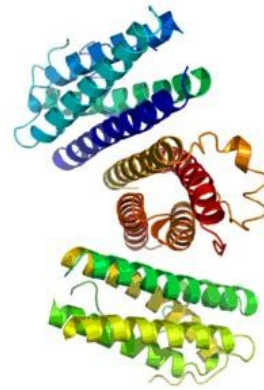
Formulation: Lyophilized after extensive dialysis against 10mM sodium acetate buffer pH=4.

Specific Activity: The ED50, calculated by the dose-dependant proliferation of murine NFS-60 indicator cells is less than 0.1 ng/ml, corresponding to a Specific Activity of 6.0×10^7 IU/ mg.

Endotoxin: Less than 0.03ng/μg (0.03IEU/μg) determined by LAL test.

Reconstitution: It is recommended to reconstitute the lyophilized rHuG-CSF in sterile 18MΩ-cm H₂O not less than 100μg/ml, which can then be further diluted to other aqueous solutions.

Storage: Lyophilized rHuG-CSF although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution rHuG-CSF should be stored at 4°C between 2-7 days and for future use below -18°C. For long-term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Aliquot to avoid repeated freeze-thaw cycles.



Crystal structure of 3 molecules of human G-CSF. From [PDB 1rhg](#)

GENE INFORMATION

Gene Name: [CSF3](#)

Synonyms: G-CSF; GCSF; MGC45931; colony stimulating factor 3 (granulocyte); colony stimulating factor 3; granulocyte colony stimulating factor; pluripoietin; filgrastim; lenograstim; Granulocyte colony-stimulating factor precursor; CSF3

mRNA Refseq: [NM_172219.1](#)

Protein Refseq: [NP_757373.1](#)

MIM: [138970](#)

GeneID: [1440](#)

UniProt ID: P09919

Chromosome Location: 17q11.2-q12

Pathway: Cytokine-cytokine receptor interaction, Hematopoietic cell lineage, Jak-STAT signaling pathway

Function: cytokine activity, enzyme binding, granulocyte colony-stimulating factor receptor binding, interleukin-6 receptor binding

REFERENCES

- 1.Nagata S, et al.Molecular cloning and expression of cDNA for human granulocyte colony-stimulating factor. Nature. 1986, 319 (6052): 415-418
- 2.Elizabeth Finkel, Stem Cells, 2005, ABC Books, ISBN 0 7333 1248 9
- 3.Root RK, Dale DC. Granulocyte colony-stimulating factor and granulocyte-macrophage colony-stimulating factor: comparisons and potential for use in the treatment of infections in nonneutropenic patients. J Infect Dis. 1999 Mar;179 Suppl 2:S342-352

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