

## Recombinant Human Pegylated Granulocyte Colony Stimulating Factor

Human, Recombinant (PEG-CSF3)

Expressed in *E. coli*

Cat. No. CRP0809

Lot. No. (See product label)

### PRODUCT INFORMATION

**Description:** Recombinant Human G-CSF produced in *E. coli* is a single, non-glycosylated, polypeptide chain containing 175 amino acids and having a molecular mass of 18,800 Dalton. PEG-GCSF is manufactured by attaching a 20,000 Dalton methoxypolyethylene glycol propionaldehyde (mPEG-ALD) to the N-terminal amino acid of G-CSF having a total molecular mass of 38800 Dalton.

**Amino-Acid Sequence:** The sequence of the first five N-terminal amino acids was determined and was found to be Met-Thr-Pro-Leu-Gly.

**M. W. :** 38,800 Da

**Recombinant:** Expressed in *E. coli*

**Purity:** >95% as determined by HPLC, FPLC and SDS-PAGE Silver Stained gel.

**Formulation:** The protein was extensively dialyzed against 10mM sodium acetate buffer PH= 4 and 5% mannitol was added.

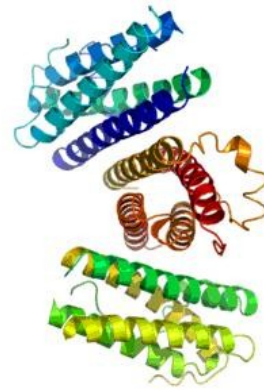
**Specific Activity:** PEG-GCSF is fully biologically active when compared to standard. The ED50, calculated by the dose-dependant proliferation of murine NFS-60 indicator cells is less than 0.1 ng/ml, corresponding to a Specific Activity of  $1.0 \times 10^7$  IU/mg.

**Endotoxin:** Less than 0.1 ng/μg (1IEU/μg) of PEG-GCSF.

**Reconstitution:** It is recommended to reconstitute the lyophilized PEG-GCSF in sterile 18MΩ-cm H<sub>2</sub>O not less than 100μg/ml, which can then be further diluted to other aqueous solutions.

**Storage:** PEG-GCSF although stable at 15°C for 1 week, should be stored between 2°C -8°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.

**FOR RESEARCH USE ONLY**



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, Tsuchiya M, Asano 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,
3. Duarte RF, et al. The synergy between stem cell factor (SCF) and granulocyte colony-stimulating factor (G-CSF): molecular basis and clinical relevance. *Leuk. Lymphoma*. 2003, 43 (6): 1179–1187.

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45-16 Ramsey Road Shirley, NY 11967, USA  
Technical Support: T: 631-871-5806 · F: 631-207-8356  
E-mail: [info@creative-biolabs.com](mailto:info@creative-biolabs.com)  
[www.creative-biolabs.com](http://www.creative-biolabs.com)