



Granulocyte Colony Stimulating Factor, human recombinant (rHuG-CSF)

Catalog No: 57059
Lot No: XXXXX
Source: *E. coli*
Synonyms: CSF-3, MGI-1G, GM-CSF beta, Pluripoietin, Filgrastim, Lenograstim, G-CSF, MGC45931, GCSF

Background

GCSF is a cytokine that controls the production, differentiation, and function of granulocytes. The active protein is found extracellularly. Three transcript variants encoding three different isoforms have been found for the GCSF gene. 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. This csf induces granulocytes.

Description

Granulocyte Colony Stimulating Factor human recombinant produced in *E. coli* is a single, non-glycosylated, polypeptide chain containing 175 amino acids and having a molecular mass of 18.8 kDa. GCSF is purified by proprietary chromatographic techniques.

Physical Appearance

Sterile filtered white lyophilized (freeze-dried) powder.

Formulation

GCSF was lyophilized after extensive dialysis against 10 mM sodium acetate buffer pH 4.

Solubility

It is recommended to reconstitute the lyophilized GCSF in sterile 20 mM AcOH not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.

Stability

Lyophilized GCSF, although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution GCSF 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). Please prevent freeze-thaw cycles.

Purity

Greater than 98.0% as determined by (a) Analysis by RP-HPLC, (b) Analysis by SDS-PAGE.

Amino Acid Sequence

The sequence of the first five N-terminal amino acids of GCSF was determined and was found to be Met-Thr-Pro-Leu-Gly.

Activity

The ED50, calculated by the dose-dependant proliferation of murine NFS-60 indicator cells (measured by 3H-thymidine uptake) is <0.1 ng/ml, corresponding to a specific activity of 100,000,000 IU/mg.

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