Recombinant Human G-CSF (CSF3)

Cat No:HR2R1448

For research use only

Overview

Quantity	50 ?g
Gene Symbol	CSF3
Gene ID	1440
Accession	P09919
Alternative Name	GCSF, Pluripoietin, INN=Filgrastim, INN=Lenograstim, C17orf33, GCSF Recombinant Human Granulocyte Colony-Stimulating Factor (CSF3)
Species	Human
Source	CHO cells
Description	G-CSF is secreted by monocytes, macrophages, and neutrophils after cell activation. It is produced also by stromal cells, fibroblasts, and endothelial cells. Epithelial carcinomas, acute myeloid leukemia cells and various tumor cell lines. The synthesis of G-CSF can be induced by bacterial endotoxins, TNF, IL-1 and GM-CSF. Comparison of the primary sequence of G-CSF with those of the two other colony stimulating factors, GM-CSF and M-CSF, shows that the three factors are not related to each other. Murine and human G-CSF show a sequence homology of approximately 70% at the DNA level and of 72% at the protein level. The G-CSF receptor, CD114, is expressed on all cells of the neutrophils and granulocytes lineage. It is expressed also in placenta cells, endothelial cells and various carcinoma cell lines. Human G-CSF is active in murine cells and vice versa. G-CSF stimulates the proliferation and differentiation of hematopoietic progenitor cells committed to the neutrophils and granulocytes lineage in a dose-dependent manner. G-CSF synergises with some other cytokines, including GM-CSF and IL-4. GM-CSF and G-CSF are required, for example, to develop neutrophilic colonies in vitro. The concerted action of G-CSF and Epo is required to support the growth of mixed colonies of the early erythroid progenitors. A combination of IL-4 with G-CSF has been shown to lead to synergistic suppression of the growth of some human leukemic cell lines.
Functions	The ED(50) was determined by the dose-dependent proliferation of murine M-NFS-60 cells is ? 0.1 ng/mL, corresponding to a specific activity of ? 1.0 x 10^8 units/mg.
Formulation	Recombinant G-CSF was lyophilized from a 0.2 ?m filtered PBS solution pH 7.0.
Solubility	A quick spin of the vial followed by reconstitution in distilled water to a concentration not less than 0.1 mg/mL. This solution can then be diluted into other buffers.
Appearance	Lyophilized Powder
Molecular Weight	19
Purity	>95% as determined by SDS-PAGE
Concentration	<1.0 EU/?g of recombinant protein as determined by the LAL method.

Shipping Condition	Ambient Temperature
Storage Condition	The lyophilized protein is stable for at least one year from date of receipt at -70?C. Upon reconstitution, this cytokine can be stored in working aliquots at 2? - 8?C for one month, or at -20?C for six months, with a carrier protein without detectable loss of activity. Avoid repeated freeze/thaw cycles.

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