

Overview

Synonyms	Granulocyte, Colony-Stimulating Factor, CSF-3, MGI-1G, GM-CSF ² , pluripoietin Granulocyte Colony-Stimulating Factor (G-CSF) is a hematopoietic cytokine belonging to the four-helix bundle cytokine superfamily. G-CSF is produced by monocytes, macrophages, fibroblasts, and endothelial cells. Its expression is highly regulated and induced by a variety of agents, including Tumor Necrosis Factor (TNF), Interleukin-1 (IL-1), Interferon ³ (IFN- ³), and Granulocyte-Macrophage Colony-Stimulating Factor (GM-CSF). G-CSF binds to the CSF-specific high affinity receptors expressed on neutrophilic granulocyte lineage. <i>In vivo</i> G-CSF regulates the production of neutrophilic granulocytes, a critical part of host defense systems, and helps the maturation of leukemic cell lines. G-CSF is widely employed clinically because of its fairly innocuous safety profile.
Description	Recombinant rat Granulocyte Colony-Stimulating Factor (rrG-CSF) produced in <i>E. coli</i> is a single non-glycosylated polypeptide chain containing of 194 amino acids. A fully biologically active molecule, rrG-CSF has a molecular mass of 21.4 kDa analyzed by non-reducing SDS-PAGE and is obtained by proprietary chromatographic techniques.
Accession No	P97712
Species	Rat
Source	<i>E. coli</i>
Biological Activity	ED ₅₀ < 0.1 ng/mL, measured by a cell proliferation assay using NSF-60 cells, corresponding to a specific activity of > 1 × 10 ⁷ units/mg.
Sequence	MIPLLTVSSL PPSLPLPRSF LLKSLEQVRK IQARNTELLE QLCATYKLCH PEELVLFQHS LGIPKASLSS CSSQALQQTK CLSQLHSGLF LYQGLLQALA GISSELAPTL DMLHLDVDNF ATTIWQQMES LGVAPTQPT QSTMPIFTSA FQRRAGGVLV TSYLQSFLET AHHALHHLPR PAQKHFPESL FISI

Properties

Measured Molecular Weight	21.4 kDa, observed by non-reducing SDS-PAGE.
Purity	> 95% by SDS-PAGE analysis.
Formulation	Lyophilized after extensive dialysis against 20mM Citric Acid
Reconstitution	Reconstituted in ddH ₂ O at 100 µg/mL.
Endotoxin Level	< 0.2 EU/µg, determined by LAL method.
Storage	Lyophilized recombinant rat Granulocyte Colony-Stimulating Factor (rrG-CSF) remains stable up to 6 months at lower than -70°C from date of receipt. Upon reconstitution, rrG-CSF remains stable up to 2 weeks at 4°C or up to 3 months at -20°C.
Note	For research use only

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