

BACKGROUND

Granulocyte Colony-Stimulating Factor, or G-CSF, is a growth factor that is considered the most potent inducer of terminal differentiation to granulocytes and macrophages of leukemic myeloid cell lines. The synthesis of G-CSF can be induced by bacterial endotoxins, TNF, IL-1 and GM-CSF. Prostaglandin E2 inhibits the synthesis of G-CSF, while in epithelial, endothelial, and fibroblastic cells secretion of G-CSF is induced by IL-17. Human and mouse G-CSF are cross-reactive.

Recombinant human G-CSF is a non-glycosylated protein, containing 175 amino acids and having a molecular mass of 18.8 kDa.

Alternative Names:

CSF-3, MGI-1G, GM-CSF β , pluripoietin

Amino Acid Sequence:

TPLGPASSLP QSFLKCLEQ VRKIQGDGAA LQEKLCATYK
LCHPEELVLL GHSLGIPWAP LSSCPSQALQ LAGCLSQLHS
GLFLYQGLLQ ALEGISPELG PTLDLQLDV ADFATTIWQQ
MEELGMAPAL QPTQGAMPAF ASAFQRRAGG VLVASHLQSF
LEVSYRVLRH LAQP

TECHNICAL INFORMATION

Source: *E.coli*

Physical Appearance:

Sterile Filtered white lyophilized (freeze-dried) powder.

Formulation:

Recombinant human G-CSF was lyophilized from 10 mM NaCitrate, pH 3.0.

Stability:

Lyophilized product is very stable at -20°C. Reconstituted material should be aliquoted and frozen at -20°C. It is recommended that a carrier protein (0.1% HSA or BSA) is added for long term storage.

Reconstitution:

Centrifuge vial before opening. When reconstituting the product, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution. It is recommended to reconstitute the lyophilized product with sterile water at a concentration of 0.1 mg/ml, which can be further diluted into other aqueous solutions.

Protein Content and Purity determined by:

- UV spectroscopy at 280 nm
- RP-HPLC calibrated against a known standard
- Quantitation against a known standard via reducing and non-reducing SDS-PAGE gels.

Endotoxin Level:

Endotoxin level, as measured by LAL analysis, is <0.01ng/ug or <0.1EU/ug.

Biological Activity:

The activity is calculated by the dose-dependent proliferation of mouse NFS-60 and is typically 10-60 pg/ml.

Products are for research use only. They are not intended for human, animal, or diagnostic applications.

