

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.

Cat. No.:
RP1072AF

Alternate Names:
CSF-3, MGI-1G, GM-CSFβ, pluripoietin

AA Sequence:

MTPLGPASSL	PQSFLKCLE	QVRKIQGDGA
ALQEKLCATY	KLCHPEELVL	LGHSLGIPWA
PLSSCPSQAL	QLAGCLSQLH	SGLFLYQGILL
QALEGISPEL	GPTLDTLQLD	VADFATTIWQ
QMEELGMAPA	LQPTQGAMPA	FASAFQRRAG
GVLVASHLQS	FLEVSRYVLR	HLAQP

TECHNICAL INFO

Source:
E. coli

Physical Appearance:
Sterile Filtered white lyophilized (freeze-dried) powder.

Formulation:
0.1% Trifluoroacetic Acid (TFA)

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 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 measured by dose-dependent NFS-60 cell proliferation, with Bioactivity Acceptance Criteria ED50 at 50 ng/mL.

Animal Component-Free
This product is produced with no animal derived raw products. All processing and handling employs animal free equipment and animal free protocols.

