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Datasheet for 009-001-U93-0010

rHuman G-CSF Protein

Overview

Description:	Human Granulocyte Colony Stimulating Factor Recombinant Protein - 009-001-U93-0010
Item No.:	009-001-U93-0010
Size:	10 µg
Applications:	SDS-PAGE, Cellular Assay
Origin:	Human
Expressed in:	E. coli

Product Details

Background:	Granulocyte-Colony Stimulating Factor (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, with a molecular weight of 18.8 kDa.
Synonyms:	CSF-3, MGI-1G, GM-CSFβ, pluripoietin
Species of Origin:	Human
Expressed in:	E. coli
Type:	Recombinant Protein
Low Endotoxin:	Yes

Target Details

Gene Name:	CSF3
Purity/Specificity:	Granulocyte Colony Stimulating Factor purity was determined to be greater than 95% as determined by analysis by UV-Spectroscopy at 280nm and by reducing and non-reducing SDS-pAGE.
Relevant Links:	• UniProtKB - P09919

Application Details

Tested Applications:	SDS-PAGE
Suggested Applications:	Cellular Assay (Based on references)
Application Note:	Granulocyte Colony Stimulating Factor Recombinant Protein has been tested by SDS-PAGE and biological activity and is suitable as a control for polyclonal or monoclonal anti-Granulocyte Colony Stimulating Factor in immunological assays. Lyophilized in 20 mM acetic acid, 50 nM sodium chloride.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
Other:	Endotoxin Level: Measured by kinetic LAL analysis and is typically ≤ 1 EU/µg protein. Biologic Activity: The activity is determined by the dose-dependent proliferation of mouse NFS-60 and is typically 10-60 pg/mL.

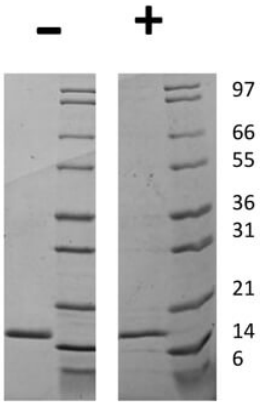
Formulation

Physical State:	Lyophilized
Concentration:	0.1 mg/mL neat
Buffer:	See application note.
Preservative:	None
Stabilizer:	None
Reconstitution Volume:	10µl (10-100µl)
Reconstitution Buffer:	Restore with deionized water (or equivalent)

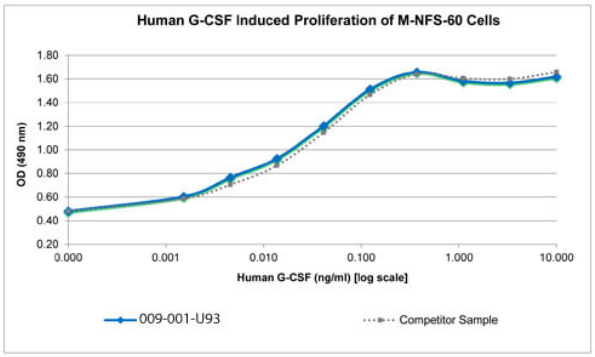
Shipping & Handling

Shipping Condition:	Ambient
Storage Condition:	Store vial at 4° C prior to restoration. Dilute only prior to immediate use. Maintain sterility. This product DOES NOT contain preservative. DO NOT VORTEX. We recommend adding a carrier protein such as HSA or BSA to 0.1% (i.e. 1.0 mg/mL). For best results aliquot contents and freeze at -20° C or colder. Avoid cycles of freezing and thawing. Centrifuge vial before each opening to dislodge contents from the cap and to clarify if contents are not clear after standing at room temperature.
Expiration:	Expiration date is six (6) months from date of receipt.

Images



SDS-PAGE
SDS-PAGE of Human Granulocyte Colony Stimulating Factor Recombinant Protein. Lane 1: 1 µg Human G-CSF in non-reducing conditions (-). Lane 2: Molecular weight marker. Lane 3: 1 µg Human G-CSF in reducing conditions (+). Lane 4: Molecular weight marker. Human G-CSF has a predicted MW of 18.7 kDa.



SDS-PAGE
Bioactivity of Human Granulocyte Colony Stimulating Factor Recombinant Protein. Serial dilutions of Human G-CSF, starting at 10 ng/mL, were added to NFS-60 cells. After 69 hours, cell proliferation was measured and the linear portion of the curve was us used to calculate the ED50. The ED50 of Human G-CSF is 15-22 pg/mL. This value is comparable to the typical expected 10-60 pg/mL.

Disclaimer

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