

Colony Stimulating Factor 3, Granulocyte (GCSF) Active Protein | GCSF active protein

Active Colony Stimulating Factor 3, Granulocyte (GCSF)

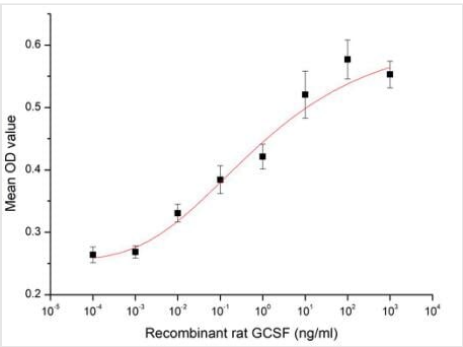
CATALOG # AAA161666	HOST E Coli	APPLICATIONS Activity Assay, Cell Culture
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PRODUCT SYNONYMS

Colony Stimulating Factor 3; Granulocyte (GCSF); Active Colony Stimulating Factor 3; Granulocyte; CSF3; G-CSF; Granulocyte Colony Stimulating Factor; Pluripoietin; Filgrastim; Lenograstim4; GCSF active protein

PRODUCT SPECIFICATIONS

Host	E Coli
Purity/Purification	Greater than 90% by SDS-PAGE
Form/Format	Freeze-dried powder; PBS, pH7.4, containing 0.01% SKL, 1mM DTT, 5% Trehalose and Proclin300.
Sequence	Ile22~Leu1 98
Applicable Applications for GCSF active protein	Activity Assay, Cell Culture
Species	Rat
Expression System	Prokaryotic expression
Tag	N-terminal His Tag
Endotoxin Level	<1.0EU per 1ug (determined by the LAL method)
Isoelectric Point	7.2
Research Area	Cytokine, Hematology
Preparation and Storage	Store at 2-8 degree C for one month, -80 degree C for 12 months



Bioactivity

Figure 2. Cell proliferation of M-NFS-60 cells after stimulated with G-CSF.

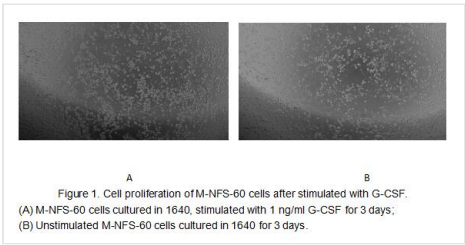
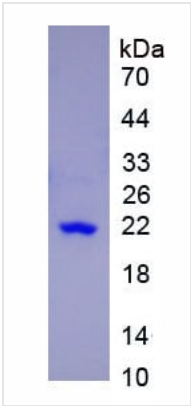


Figure 1. Cell proliferation of M-NFS-60 cells after stimulated with G-CSF. (A) M-NFS-60 cells cultured in 1640, stimulated with 1 ng/ml G-CSF for 3 days; (B) Unstimulated M-NFS-60 cells cultured in 1640 for 3 days.

Bioactivity

G-CSF is a pleiotropic cytokine best known for its specific effects on the proliferation, differentiation, and activation of hematopoietic cells of the neutrophilic granulocyte lineage. It is produced mainly by monocytes and macrophages upon activation by endotoxin, TNF-alpha and IFN-gamma. In addition, various carcinoma cell lines and myeloblastic leukemia cells can express G-CSF constitutively. In vitro, G-CSF stimulates growth, differentiation and functions of cells from the neutrophil lineage. Consistent with its in vitro functions, G-CSF has been found to play important roles in defense against infection, in inflammation and repair, and in the maintenance of steady state hematopoiesis. The activity of G-CSF is usually measured by a cell proliferation assay using M-NFS60 mouse myelogenous leukemia lymphoblast cells. M-NFS60 cells were seeded into triplicate wells of 96-well plates at a density of 8,000 cells/well with 2% serum standard 1640 which contains various concentrations of recombinant rat G-CSF. After incubated for 3 days, cells were observed by inverted microscope and cell proliferation was measured by Cell Counting Kit-8 (CCK-8). Briefly, 10 ul of CCK-8 solution was added to each well of the plate, then the absorbance at 450 nm was measured using a microplate reader after incubating the plate for 2-4 hours at 37 degree C. Proliferation of M-NFS-60 cells after incubation with G-CSF for 3 days observed by inverted microscope was shown in Figure 1. Cell viability was assessed by CCK-8 (Cell Counting Kit-8) assay after incubation with recombinant rat G-CSF for 3 days. The result was shown in Figure 2. It was obvious that G-CSF significantly increased cell viability of M-NFS-60 cells. The EC50 is 0.63 ng/ml



SDS-PAGE

Figure. SDS-PAGE

ADDITIONAL INFORMATION

Product Categories/Family for GCSF active protein	Active proteins
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NCBI AND UNIPROT INFORMATION

NCBI GI #	81908538
UniProt Accession #	P97712
Molecular Weight	23,660 Da
NCBI Official Full Name	Granulocyte colony stimulating factor
UniProt Protein Name	Granulocyte colony stimulating factor

UniProt Gene Name	Csf3
UniProt Entry Name	P97712_RAT

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

AAA Biotech | Tel: +1 (619) 604-9440 | Fax: +1 (619) 604-9441 | contact@aaabiotech.com
Online datasheet: <https://stage.aaabiotech.com/e-coli-active-protein/colony-stimulating-factor-3-granulocyte-gcsf/161666>