

# Recombinant Human G-CSF/CSF3 Protein (Fc Tag)

Catalog Number:PKSH031938



**Note:** Centrifuge before opening to ensure complete recovery of vial contents.

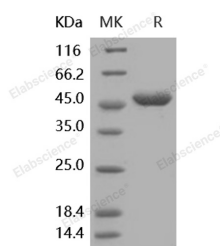
## Description

<b>Synonyms</b>	Granulocyte Colony-Stimulating Factor;G-CSF;Pluripoietin;Filgrastim;Lenograstim;CSF3;C17orf33;GCSF
<b>Species</b>	Human
<b>Expression Host</b>	HEK293 Cells
<b>Sequence</b>	Ala 30-Pro 204
<b>Accession</b>	NP_757373.1
<b>Calculated Molecular Weight</b>	45.4 kDa
<b>Observed molecular weight</b>	48 kDa
<b>Tag</b>	N-hFc
<b>Bioactivity</b>	Measured in a cell proliferation assay using a murine myeloblastic cell line, NFS-60.The ED50 for this effect is typically 0.2-0.8 ng/ml.

## Properties

<b>Purity</b>	> 97 % as determined by reducing SDS-PAGE.
<b>Endotoxin</b>	< 1.0 EU per µg of the protein as determined by the LAL method.
<b>Storage</b>	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.
<b>Shipping</b>	This product is provided as lyophilized powder which is shipped with ice packs.
<b>Formulation</b>	Lyophilized from sterile 100mM Glycine, 10mM NaCl, 50mM Tris, pH 7.5 Normally 5 % - 8 % trehalose, mannitol and 0.01 % Tween80 are added as protectants before lyophilization. Please refer to the specific buffer information in the printed manual.
<b>Reconstitution</b>	Please refer to the printed manual for detailed information.

## Data



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## Background

Granulocyte-colony stimulating factor (G-CSF) is a growth factor and an essential cytokine belonging to the CSF family of hormone-like glycoproteins. It is produced by numerous cell types including immune and endothelial cells. Recent animal studies have also revealed that G-CSF activates multiple signaling pathways, such as Akt and also the Janus family kinase-2 and signal transducer and activation of transcription-3 (Jak2-STAT3) pathway, thereby promoting survival, proliferation, differentiation and mobilisation of haematopoietic stem and progenitor cells. G-CSF is a cytokine that have

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been demonstrated to improve cardiac function and perfusion in myocardial infarction. And it was initially evaluated as a stem cell mobilizer and erythropoietin as a cytoprotective agent. G-CSF prevents left ventricular remodeling after myocardial infarction by decreasing cardiomyocyte death and by increasing the number of blood vessels, suggesting the importance of direct actions of G-CSF on the myocardium rather than through mobilization and differentiation of stem cells. Accordingly, recombinant human (rh)G-CSF has been extensively used in clinical haematology and oncology to enable bone marrow transplantation or to treat chemotherapy-associated neutropenia. In preclinical study, G-CSF improved cardiac function and perfusion by angiomyogenesis and protection of cardiomyocytes in myocardial infarction.

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