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## Datasheet for ABIN7195216

**G-CSF Protein**

## Overview

Quantity:	5 µg
Target:	G-CSF (CSF3)
Origin:	Human
Source:	HEK-293 Cells
Protein Type:	Recombinant
Biological Activity:	Active

## Product Details

Purpose:	Recombinant Human G-CSF/CSF3 Protein (Active)
Sequence:	Ala30-Pro204
Characteristics:	A DNA sequence encoding the human GCSF isoform b (NP_757373.1) (Ala30-Pro204) was expressed.
Purity:	> 95 % as determined by reducing SDS-PAGE.
Endotoxin Level:	< 1.0 EU per µg of the protein as determined by the LAL method.
Biological Activity Comment:	Measured in a cell proliferation assay using NFS-60 mouse myelogenous leukemia lymphoblast cells. The ED50 for this effect is typically 0.04-0.2 ng/mL.

## Target Details

Target:	G-CSF (CSF3)
Alternative Name:	G-CSF/CSF3 ( <a href="#">CSF3 Products</a> )

## Target Details

Background:	<p>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. G-CSF binding to its receptor G-CSF-R which belongs to the cytokine receptor type I family depends on the interaction of alpha-helical motifs of the former and two fibronectin type III as well as an immunoglobulin-like domain of the latter. 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 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. Synonym: Granulocyte Colony-Stimulating Factor, G-CSF, Pluripoietin, Filgrastim, Lenograstim, CSF3, C17orf33, GCSF</p>
Molecular Weight:	18.7 kDa
NCBI Accession:	<a href="#">NP_757373</a>
Pathways:	<a href="#">Cellular Response to Molecule of Bacterial Origin</a> , <a href="#">Regulation of Actin Filament Polymerization</a>

## Application Details

Restrictions:	For Research Use only
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## Handling

Format:	Lyophilized
Reconstitution:	Please refer to the printed manual for detailed information.
Buffer:	Lyophilized from sterile PBS, pH 7.4.
Storage:	4 °C,-20 °C,-80 °C

## Handling

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Storage Comment: 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.