

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

Catalog Number: PKSH031938

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

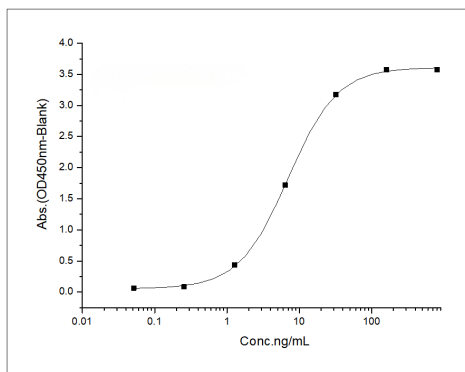
Description

| | |
|----------------------|--|
| Species | Human |
| Source | HEK293 Cells-derived Human G-CSF/CSF3 protein Ala 30-Pro 204, with an N-terminal hFc |
| Calculated MW | 45.4 kDa |
| Observed MW | 48 kDa |
| Accession | NP_757373.1 |
| Bio-activity | Measured in a cell proliferation assay using a murine myeloblastic cell line, NFS-60. The ED ₅₀ for this effect is typically 0.2-0.8 ng/ml. |

Properties

| | |
|-----------------------|---|
| Purity | > 97 % as determined by reducing SDS-PAGE. |
| Endotoxin | < 1.0 EU per µg of the protein as determined by the LAL method. |
| Storage | 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. |
| Shipping | This product is provided as lyophilized powder which is shipped with ice packs. |
| Formulation | Lyophilized from sterile 100mM Glycine, 10mM NaCl, 50mM Tris, pH 7.5 Normally 5% - 8% trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization. Please refer to the specific buffer information in the printed manual. |
| Reconstitution | Please refer to the printed manual for detailed information. |

Data



Immobilized Recombinant Human G-CSFR / CD114 Protein (His Tag) (Cat: PKSH031748) at 2 µg/mL (100 µL/well) can bind Recombinant Human G-CSF / CSF3 Protein (Fc Tag) (Cat: PKSH031938), the EC₅₀ is 5-15 ng/mL.

Background

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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 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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