

Human G-CSF R / CD114 Protein, Fc Tag

Catalog # AMS.GCR-H5250-200UG

For Research Use Only

Description

Source Human G-CSF R, Fc Tag (GCR-H5250) is expressed from human 293 cells (HEK293). It contains AA Glu 25 - Pro 621 (Accession # NP_000751.1). Predicted N-terminus: Glu 25

Predicted N-terminus Glu 25

Protein Structure

G-CSF R(Glu 25 - Pro 621) NP_000751.1	Fc(Pro 100 - Lys 330) P01857
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Molecular Characterization This protein carries a human IgG1 Fc tag at the C-terminus. The protein has a calculated MW of 92.8 kDa. The protein migrates as 100-120 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.

Endotoxin Less than 1.0 EU per µg by the LAL method.

Purity >95% as determined by SDS-PAGE.

Bioactivity Measured by its binding ability in a functional ELISA. Immobilized Human G-CSF, Tag Free (Cat. No. GCF-H5214) at 5 µg/mL (100 µL/well) can bind Human G-CSF R, Fc Tag (Cat. No. GCR-H5250) with a linear range of 0.5-5 ng/mL (QC tested).

Formulation and Storage

Formulation Lyophilized from 0.22 µm filtered solution in 50 mM Tris, 100 mM Glycine, pH7.5. Normally trehalose is added as protectant before lyophilization.

Contact us for customized product form or formulation.

Reconstitution Please see Certificate of Analysis for specific instructions. For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.

Storage For long term storage, the product should be stored at lyophilized state at -20°C or lower. Please avoid repeated freeze-thaw cycles.

No activity loss was observed after storage at:

- 4-8°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

Background

Background Granulocyte Colony Stimulating Factor Receptor (G-CSFR) is also known as Cluster of Differentiation 114 (CD114), CSF3R and GCSF, is a cell-surface receptor for the granulocyte colony-stimulating factor (G-CSF), a cytokine that plays a critical role in the regulation of the activation, proliferation, differentiation, and survival of the neutrophilic granulocyte lineage. G-CSFR belongs to a family of cytokine receptors known as the hematopoietin receptor family. This type I membrane protein has a composite structure consisting of an immunoglobulin(Ig)-like domain, a cytokine receptor-homologous (CRH) domain and three fibronectin type III (FNIII) domains in the extracellular region. G-CSFR is present mainly on precursor cells in the bone marrow, and, in response to stimulation by G-CSF, initiates cell proliferation and differentiation into mature neutrophilic granulocytes and macrophages. G-CSFR mediates the specific effect of GCSF through activating a variety of intracellular signaling cascades, including the Jak/Stat, PI3/Akt, Ras-Raf-MAP kinase, and Src family kinase pathways, and thus functions in defense against infection, inflammation and repair, and in the maintenance of steady state hematopoiesis. Mutations in this gene are a cause of Kostmann syndrome, also known as severe congenital neutropenia. Mutations in the intracellular part of this receptor are also associated with certain types of leukemia.

References

- (1) Liu H, et al., 2006, J Immunol, 176(4):2407-13.
- (2) Zeidler C, Welte K, 2002, Semin. Hematol. 39 (2): 82-8.
- (3) Beekman R, et al., 2010, Blood, 115(25): 5131-6.

Please contact us at info@amsbio.com, if you have any questions about this product.

AMSBIO | www.amsbio.com | info@amsbio.com

 **UK & Rest of the World**
184 Park Drive, Milton Park
Abingdon OX14 4SE, UK
T: +44 (0)1235 828 200
F: +44 (0) 1235 820 482

 **North America**
1035 Cambridge Street,
Cambridge, MA 02141
T: +1 (617) 945-5033 or
T: +1 (800) 987-0985
F: +1 (617) 945-8218

 **Germany**
Bockenheimer Landstr. 17/19
60325 Frankfurt/Main
T: +49 (0) 69 779099
F: +49 (0) 69 13376880

 **Switzerland**
Centro Nord-Sud 2E
CH-6934 Bioggio-Lugano
T: +41(0) 91 604 55 22
F: +41(0) 91 605 17 85

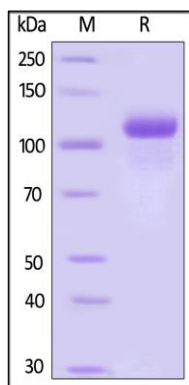
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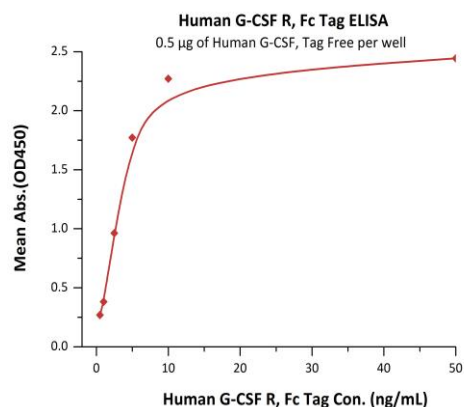
Assay Data

SDS-PAGE Data



Human G-CSF R, Fc Tag on SDS-PAGE under reducing (R) condition. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 95%.

Bioactivity Data



Immobilized Human G-CSF, Tag Free (Cat. No. GCF-H5214) at 5 µg/mL (100 µL/well) can bind Human G-CSF R, Fc Tag (Cat. No. GCR-H5250) with a linear range of 0.5-5 ng/mL (QC tested).

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T: +41(0) 91 604 55 22
F: +41(0) 91 605 17 85