Human G-CSFR / CD114 / CSF3R Protein (Fc Tag)

Catalog Number: **10218-H02H**

Sino Biological
Biological Solution Specialist

General Information

Gene Name Synonym:

CD114; CSF3R; G-CSF R; GCSFR

Protein Construction:

A DNA sequence encoding the extracellular domain (Met 1-Pro 621) of human G-CSF receptor (NP_000751.1) precursor was expressed with the fused Fc region of human IgG1 at the C-terminus.

Source: Human

Expression Host: HEK293 Cells

QC Testing

Purity: > 95 % as determined by SDS-PAGE

Bio Activity:

Measured by its ability to inhibit GCSF-induced proliferation of NFS60 mouse myeloid cells.The ED_{50} for this ettect is typically 2-20 ng/ml in the presence of 0.125ng/ml of recombinant human GCSF.

Endotoxin:

< 1.0 EU per μg of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 ℃

Predicted N terminal: Glu 25

Molecular Mass:

The mature recombinant human G-CSFR/Fc is a disulfide-linked homodimeric protein. The reduced monomer consists of 835 amino acids and predicts a molecular mass of 93.3 kDa. By SDS-PAGE under reducing conditions, the apparent molecular mass of rh GCSFR/Fc monomer is approximately 120-130 kDa due to glycosylation.

Formulation:

Lyophilized from sterile PBS, pH 7.4

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

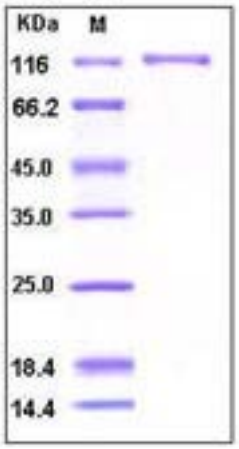
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Granulocyte Colony Stimulating Factor Receptor (G-CSFR), also known as CD114, which belongs to the cytokine receptor superfamily, is a cell surface receptor for colony stimulating factor 3 (CSF3). It is a critical regulator of granulopoiesis. 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. Mutations in the G-CSF receptor leading to carboxy-terminal truncation transduce hyperproliferative growth responses, and are implicated in the pathological progression of severe congenital neutropenia (SCN) to acute myelogenous leukemia (AML). Additionally, autocrine/paracrine stimulation of G-CSFR may be important in the biology of solid tumors, including metastasis.

References

1.Kasper B, *et al.* (1999) Association of src-kinase Lyn and non-src-kinase Syk with the granulocyte colony-stimulating factor receptor (G-CSFR) is not abrogated in neutrophils from severe congenital neutropenia patients with point mutations in the G-CSFR mRNA. Int J Hematol. 70(4): 241-7. 2.Hollenstein U, *et al.* (2000) Endotoxin down-modulates granulocyte colony-stimulating factor receptor (CD114) on human neutrophils. J Infect Dis. 182(1): 343-6. 3.Kindwall-Keller TL, *et al.* (2008) Role of the proteasome in modulating native G-CSFR expression. Cytokine. 43(2): 114-23.