Data Sheet (Cat.No.TMPY-00814)

TargetMol

CSF3R/G-CSFR Protein, Human, Recombinant (hFc)

General Information

Synonyms:	G-CSF R;GCSFR;CD114;CSF3R;colony stimulating factor 3 receptor (granulocyte)
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. Predicted N terminal: Glu 25
Species:	Human
Expression Host:	HEK293 Cells
Accession:	Q99062-1
Molecular Weight:	93.3 kDa (predicted); 120-130 kDa (reducing condition, due to glycosylation)

QC Testing

Biological Activity:	Measured by its ability to inhibit GCSF-induced proliferation of NFS60 mouse myeloid cells. The ED50 for this ettect is typically 2-20 ng/ml in the presence of 0.125ng/ml of recombinant human GCSF.
Purity:	> 95 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Shipping:

In general, Lyophilized powders are shipping with blue ice.

Protein Background

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.

Reference

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.

Hollenstein U, et al. (2000) Endotoxin down-modulates granulocyte colony-stimulating factor receptor (CD114) on human neutrophils. J Infect Dis. 182(1): 343-6.

Kindwall-Keller TL, et al. (2008) Role of the proteasome in modulating native G-CSFR expression. Cytokine. 43(2): 114-23.

Beel K, et al. (2009) G-CSF receptor (CSF3R) mutations in X-linked neutropenia evolving to acute myeloid leukemia or myelodysplasia. Haematologica. 94(10): 1449-52.

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