

# Human CSF2RA / GM-CSFR / CD116 Protein (Fc Tag)

Catalog Number: 10701-H02H



**Sino Biological Inc.**  
Biological Solution Specialist

## General Information

### Gene Name Synonym:

CD116; CDw116; CSF2R; CSF2RAX; CSF2RAY; CSF2RX; CSF2RY; GM-CSF-R-alpha; GMCSFR; GMR; SMDP4; CD116; Csfgmra; GM-CSF-Ra; GM-CSFR

### Protein Construction:

A DNA sequence encoding the extracellular domain (Met 1-Gly 320) of human GM-CSFR $\alpha$  (NP\_006131.2) pro-protein was expressed with the C-terminal fused Fc region of human IgG1.

**Source:** Human

**Expression Host:** Human Cells

## QC Testing

**Purity:** > 90 % as determined by SDS-PAGE

### Bio Activity:

**Measured by its ability to inhibit GM-CSF dependent proliferation of TF-1 human erythroleukemic cells. The ED<sub>50</sub> for this effect is typically 10-15  $\mu$ g/ml .**

### Endotoxin:

< 1.0 EU per  $\mu$ g of the protein as determined by the LAL method

### Stability:

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

**Predicted N terminal:** Glu 23

### Molecular Mass:

The recombinant human GM-CSFR $\alpha$  consists of 536 amino acids and has a predicted molecular mass of 61.2 kDa.

### 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:

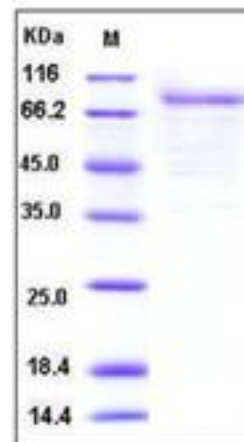
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

**Avoid repeated freeze-thaw cycles.**

### Reconstitution:

Detailed reconstitution instructions are sent along with the products.

## SDS-PAGE:



## Protein Description

CD116/GM-CSFR has been preferentially associated with M4, M5 subtype of AML but is not specific. The cluster of differentiation (cluster of designation) (often abbreviated as CD) is a protocol used for the identification and investigation of cell surface molecules present on white blood cells initially but found in almost any kind of cell of the body, providing targets for immunophenotyping of cells. Physiologically, CD molecules can act in numerous ways, often acting as receptors or ligands (the molecule that activates a receptor) important to the cell. A signal cascade is usually initiated, altering the behavior of the cell (see cell signaling). Some CD proteins do not play a role in cell signaling, but have other functions, such as cell adhesion. CD116/GM-CSFR is the alpha subunit of the heterodimeric receptor for colony stimulating factor 2, a cytokine which controls the production, differentiation, and function of granulocytes and macrophages. The encoded protein is a member of the cytokine family of receptors. CD116/GM-CSFR is found in the pseudoautosomal region (PAR) of the X and Y chromosomes.

## References

1. Sjöblom C, *et al.* (2002) Granulocyte-macrophage colony-stimulating factor (GM-CSF) acts independently of the beta common subunit of the GM-CSF receptor to prevent inner cell mass apoptosis in human embryos. *Biol Reprod.* 67(6): 1817-23.
2. Goldstein JI, *et al.* (2011) Defective leukocyte GM-CSF receptor (CD116) expression and function in inflammatory bowel disease. *Gastroenterology.* 141(1): 208-16.
3. Saulle E, *et al.* (2009) Colocalization of the VEGF-R2 and the common IL-3/GM-CSF receptor beta chain to lipid rafts leads to enhanced p38 activation. *Br J Haematol.* 145(3): 399-411.

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