

Rat CD131 / CSF2RB / IL3RB / IL5RB Protein (Fc Tag)

Catalog Number: 80323-R02H



Sino Biological
Biological Solution Specialist

General Information

Gene Name Synonym:

CSF2RB

Protein Construction:

A DNA sequence encoding the rat CSF2Rb (Met1-Trp440) was expressed with the Fc region of human IgG1 at the C-terminus.

Source: Rat

Expression Host: HEK293 Cells

QC Testing

Purity: (24.0+69.6) % as determined by SDS-PAGE

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 °C

Predicted N terminal: His 23

Molecular Mass:

The recombinant rat CSF2Rb/Fc is a disulfide-linked homodimer. The reduced monomer comprises 659 amino acids and has a predicted molecular mass of 75.1 kDa. The apparent molecular mass of the protein is approximately 123 and 89 kDa in SDS-PAGE under reducing conditions.

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:

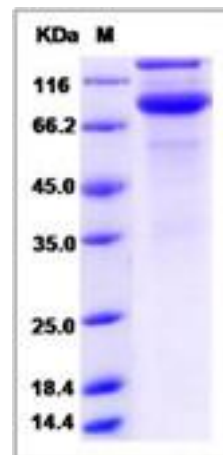
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Colony stimulating factor 2 receptor, beta, low-affinity (CSF2RB) also known as CD131 antigen (CD131), cytokine receptor common subunit beta, GM-CSF/IL-3/IL-5 receptor common beta-chain, interleukin 3 receptor/granulocyte-macrophage colony stimulating factor 3 receptor, beta (IL3RB), is the common beta chain of the high affinity receptor for IL-3, IL-5 and CSF. Defects in this protein have been reported to be associated with protein alveolar proteinosis (PAP). CD131 belongs to the type I cytokine receptor family. 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. Defects in CD131/CSF2RB are the cause of pulmonary surfactant metabolism dysfunction type 5 (SMDP5). SMDP5 is a rare lung disorder due to impaired surfactant homeostasis. It is characterized by alveolar filling with floccular material that stains positive using the periodic acid-Schiff method and is derived from surfactant phospholipids and protein components. Excessive lipoproteins accumulation in the alveoli results in severe respiratory distress.

References

1. Selleri S, *et al.* (2008) GM-CSF/IL-3/IL-5 receptor common beta chain (CD131) expression as a biomarker of antigen-stimulated CD8+ T cells. *J Transl Med.* 6:17.
2. Woodcock, *et al.* (1994) Three residues in the common beta chain of the human GM-CSF, IL-3 and IL-5 receptors are essential for GM-CSF and IL-5 but not IL-3 high affinity binding and interact with Glu21 of GM-CSF. *EMBO J.* 13(21): 5176-85.
3. Dirksen U, *et al.* (1997) Human pulmonary alveolar proteinosis associated with a defect in GM-CSF/IL-3/IL-5 receptor common beta chain expression. *J Clin Invest.* 100(9): 2211-7.

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