Rhesus CD16 / FCGR3 Protein (His & AVI Tag), Biotinylated

Catalog Number: 90013-C27H-B

Sino Biological Inc.
Biological Solution Specialist

General Information

Gene Name Synonym:

CD16; Fc gamma RIII; FCRIII; CD16

Protein Construction:

A DNA sequence encoding the rhesus CD16 (NP_001258584.1) extracellular domain (Met 1- Gln 208) was fused with a c-terminal polyhistidine tagged AVI tag at the C-terminus. The expressed protein was biotinylated in vivo by the Biotin–Protein ligase (BirA enzyme) which is co-expressed.

Source: Rhesus

Expression Host: Human Cells

QC Testing

Purity: > 92 % as determined by SDS-PAGE

Bio Activity:

1. Measured by its ability to bind human IgG1 in a functional ELISA. 2. Labeling ratio of biotin to protein: 0.4

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: Gly 17

Molecular Mass:

The recombinant rhesus CD16 consists of 223 amino acids and has a calculated molecular mass of 25.3 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:

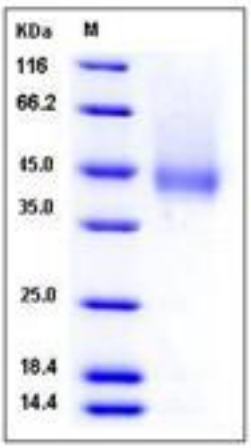
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Fc receptors bind the most common class of antibody, IgG, are called Fc gamma receptors (FcγR). FcγR is divided into three classes, Fc γ RI (CD64), Fc γ RII (CD32), and Fc γ RIII (CD16). CD16 protein is a multifunctional, low/intermediate affinity receptor, which belongs to the immunoglobulin superfamily. It is found on the surface of natural killer cells, neutrophil polymorphonuclear leukocytes, monocytes and macrophages. Mouse CD16 is encoded by a single gene, while, human CD16 is expressed as two distinct forms (CD16a/FcγRIIIa and CD16b/FcγRIIIb) encoded by two different highly homologous genes in a cell type-specific manner. CD16 is involved in phagocytosis, secretion of enzymes, inflammatory mediators, antibody-dependent cellular cytotoxicity (ADCC), and clearance of immune complexes.

References

1.Edberg JC, *et al.* (2002) Genetic linkage and association of Fcgamma receptor IIIA (CD16A) on chromosome 1q23 with human systemic lupus erythematosus. Arthritis Rheum. 46(8): 2132-40.
2.Li P, *et al.* (2002) Recombinant CD16A-Ig forms a homodimer and cross-blocks the ligand binding functions of neutrophil and monocyte Fcgamma receptors. Mol Immunol. 38(7): 527-38.
3.Li P, *et al.* (2007) Affinity and kinetic analysis of Fcgamma receptor IIIa (CD16a) binding to IgG ligands. J Biol Chem. 282(9): 6210-21.