

Human CD64 / FCGR1A Protein (His & AVI Tag), Biotinylated

Catalog Number: 10256-H27H-B



Sino Biological Inc.
Biological Solution Specialist

General Information

Gene Name Synonym:

CD64; Fc gamma RI; AI323638; AV092959; CD64; FcgammaRI; IGGHAFc

Protein Construction:

A DNA sequence encoding the extracellular domain of human CD64 (NP_000557.1) (Met 1-Thr 287) 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: Human

Expression Host: Human Cells

QC Testing

Purity: > 90 % as determined by SDS-PAGE

Bio Activity:

1. Measured by its binding ability in a functional ELISA. 2. Immobilized recombinant CD64-AVI-His (Cat:10256-H27H-B) at 10 µg/ml (100 µl/well) can human IgG1 with a linear range of 1.56-50 ng/ml. 3. Labeling ratio of biotin to protein: 1.09.

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: Gln 16

Molecular Mass:

The secreted recombinant human CD64 consists of 307 amino acids and has a predicted molecular mass of 34.4 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:

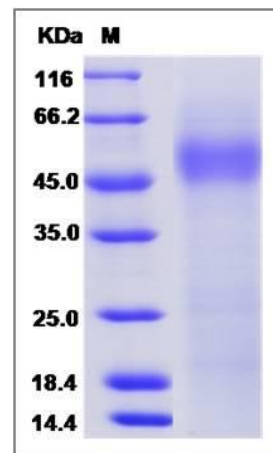
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

High affinity immunoglobulin gamma Fc receptor I, also known as FCGR1 and CD64, is an integral membrane glycoprotein and a member of the immunoglobulin superfamily. CD64 is a high affinity receptor for the Fc region of IgG gamma and functions in both innate and adaptive immune responses. Receptors that recognize the Fc portion of IgG function in the regulation of immune response and are divided into three classes designated CD64, CD32, and CD16. CD64 is structurally composed of a signal peptide that allows its transport to the surface of a cell, three extracellular immunoglobulin domains of the C2-type that it uses to bind antibody, a hydrophobic transmembrane domain, and a short cytoplasmic tail. CD64 is constitutively found on only macrophages and monocytes, but treatment of polymorphonuclear leukocytes with cytokines like IFN γ and G-CSF can induce CD64 expression on these cells. The inactivation of the mouse CD64 resulted in a wide range of defects in antibody Fc-dependent functions. Mouse CD64 is an early participant in Fc-dependent cell activation and in the development of immune responses.

References

1. Allen J.M., *et al.*, (1988), Nucleotide sequence of three cDNAs for the human high affinity Fc receptor (FcRI). *Nucleic Acids Res.* 16:11824-11824.
2. Allen J.M., *et al.*, (1989), Isolation and expression of functional high-affinity Fc receptor complementary DNAs. *Science* 243:378-381.
3. Porges A.J., *et al.*, (1992), Novel Fc gamma receptor I family gene products in human mononuclear cells. *J. Clin. Invest.* 90:2102-2109.

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