Mouse CD64 / FCGR1 Protein (His & AVI Tag), Biotinylated

Catalog Number: **50086-M27H-B**

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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 (Met 1-Pro 297) of mouse FCGR1 (NP_034316.1) 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: Mouse

Expression Host: Human Cells

QC Testing

Purity: > 90 % as determined by SDS-PAGE

Bio Activity:

1. Measured by its ability to bind mouse APCS in a functional ELISA. 2. Labeling ratio of biotin to protein: 1.1

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: Glu 25

Molecular Mass:

The recombinant mouse FCGR1 consists of 308 amino acids after removal of the signal peptide and has a predicted molecular mass of 34.3 kDa. In SDS-PAGE under reducing conditions, the apparent molecular mass of rm FCGR1 is approximately 50-55 kDa due to glycosylation.

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:

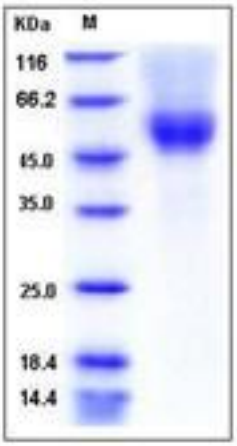
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

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 IFNγ 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.