

Active Recombinant Human CD64 Protein, His-tagged

Cat. No. CD64-374H Lot. No. (See product label)

SPECIFICATION

Product Overview

Recombinant Human CD64 (NP_000557.1) (Met1-Pro288) was expressed with a polyhistidine tag at the C-terminus. The purified protein was biotinylated in vitro.

Species

Human

Source

CHO

ProteinLength

Met1-Pro288

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.

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Predicted N Terminal	Gln 16
Form	Lyophilized from sterile PBS. Normally 5 %- 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization.
Bio-activity	Measured by its binding ability in a functional ELISA. Immobilized biotinylated Human CD64 Protein at 10 µg/mL can bind human IgG1. The EC50 of human IgG1 is 6-14 ng/mL
Molecular Mass	The recombinant human FCGR1A consists of 284 amino acids and predicts a molecular mass of 32.1 kDa.
Endotoxin	< 1.0 EU per µg protein as determined by the LAL method.
Purity	> 95 % as determined by SDS-PAGE.
Storage	Samples are stable for up to twelve months from date of receipt at -70 centigrade. Store it under sterile conditions at -20 centigrade to -80 centigrade. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.
Reconstitution	It is recommended that sterile water be added to the vial to prepare a stock solution of 0.2 ug/ul. Centrifuge the vial at 4°C before opening to recover the entire contents.

GENE INFORMATION

Official Symbol	CD64
Synonyms	FCGR1A;CD64; FCRI; CD64A; IGFR1;high affinity immunoglobulin gamma Fc receptor I;Fc fragment of IgG, high affinity Ia, receptor (CD64);Fc fragment of IgG, high affinity Ia, receptor for (CD64);Fc gamma receptor Ia;Fc-gamma RI;Fc-gamma receptor I A1;IgG Fc receptor I;fc-gamma RIA;fcgammaRIa

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