

Active Recombinant Human FCGR1A, His-tagged

Cat. No. FCGR1A-179H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human FCGR1A /FCGR1 /CD64 Protein (rh CD64 / FCGR1A) Gln 16 - Pro 288 (Accession # AAH32634) was produced in human 293 cells (HEK293).
Species	Human
Source	HEK293
ProteinLength	16-288 a.a.
Description	Receptors that recognize the Fc portion of IgG are divided into three groups designated Fc gamma RI, RII, and RIII, also known respectively as CD64, CD32, and CD16. Fc gamma RI binds IgG with high affinity and functions during early immune responses. Fc gamma RII and RIII are low affinity receptors that recognize IgG as aggregates surrounding multivalent antigens during late immune responses. High affinity immunoglobulin gamma Fc receptor I is also known as FCGR1A, FCG1, FCGR1, CD64 and IGFR1, is a type of integral membrane glycoprotein that binds monomeric IgG-type antibodies with high affinity, which belongs to the immunoglobulin superfamily or FCGR1 family. FCGR1A / CD64 contains 3 Ig-like C2-type (immunoglobulin-like) domains. 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.
Form	Lyophilized from 0.22 μ m filtered solution in PBS, pH7.4. Normally Mannitol or Trehalose are added as protectants before lyophilization.

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Bio-activity	Scatchard analysis showed estimated the affinity constant (KD) of CD64 bound to Human IgG1 was less than 0.138 nM.
Molecular Mass	rh CD64 / FCGR1A is fused with a polyhistidine tag at the C-terminus, and has a calculated MW of 32.5 kDa. The predicted N-terminus is Gln 16 . DTT-reduced Protein migrates as 45-60 kDa in SDS-PAGE due to glycosylation.
Endotoxin	Less than 1.0 EU per µg of the rh CD64 / FCGR1A by the LAL method.
Purity	>90% as determined by SDS-PAGE.
Storage	Avoid repeated freeze-thaw cycles.No activity loss was observed after storage at:In lyophilized state for 1 year (4oC); After reconstitution under sterile conditions for 3 months (-70oC).
Reconstitution	See Certificate of Analysis for reconstitution instructions and specific concentrations.

GENE INFORMATION

Gene Name	FCGR1A Fc fragment of IgG, high affinity Ia, receptor (CD64) [Homo sapiens]
Official Symbol	FCGR1A
Synonyms	FCGR1A; Fc fragment of IgG, high affinity Ia, receptor (CD64); Fc fragment of IgG, high affinity Ia, receptor for (CD64); high affinity immunoglobulin gamma Fc receptor I; CD64; CD64A; fcgammaRIa; Fc-gamma RI; fc-gamma RIA; Fc gamma receptor; IgG Fc receptor I; Fc-gamma receptor I A1; FCRI; IGFR1; FLJ18345;
Gene ID	2209
mRNA Refseq	NM_000566

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Protein Refseq	NP_000557
MIM	146760
UniProt ID	P12314
Chromosome Location	1q21.2-q21.3
Pathway	Adaptive Immune System, organism-specific biosystem; Antigen processing-Cross presentation, organism-specific biosystem; Class I MHC mediated antigen processing and presentation, organism-specific biosystem; Cross-presentation of soluble exogenous antigens (endosomes), organism-specific biosystem; Cytokine Signaling in Immune system, organism-specific biosystem; Fc gamma R-mediated phagocytosis, organism-specific biosystem;
Function	IgG binding; protein binding; receptor activity; receptor signaling protein activity;

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