

Active Recombinant Cynomolgus Monkey FCGR2A protein, His-tagged

Cat. No. FCGR2A-270C **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Cynomolgus Monkey FCGR2A(Thr29-Ile211) fused with His tag at C-terminal was expressed in HEK293.
Species	Cynomolgus
Source	HEK293
ProteinLength	29-211 a.a.
Description	Receptors for the Fc region of IgG (Fc gamma Rs) are members of the Ig superfamily that function in the activation or inhibition of immune responses such as degranulation, phagocytosis, ADCC (antibody-dependent cellular toxicity), cytokine release, and B cell proliferation. The Fc gamma Rs have been divided into three classes based on close relationships in their extracellular domains; these groups are designated Fc gamma RI/CD64, Fc gamma RII/CD32, and Fc gamma RIII/CD16. CD32 proteins are encoded by three genes in human (Fc gamma RII A, B, and C), two in cynomolgus (Fc gamma RII A and B), and one in mouse (Fc gamma RIIB). Fc gamma RII A and C contain ITAM sequences, while Fc gamma RIIB contains an ITIM sequence in their cytoplasmic domains. The CD64 proteins are high affinity receptors (~10⁻⁸-10⁻⁹ M) capable of binding monomeric IgG, whereas the CD16 and CD32 proteins bind IgG with lower affinities (~10⁻⁶-10⁻⁷ M) and only recognize IgG aggregates surrounding multivalent antigens. Mature cynomolgus Fc gamma RIIA consists of a 183 amino acid (aa) extracellular domain (ECD) with two Ig-like

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domains, a 23 aa transmembrane segment, and a 77 aa cytoplasmic domain. Within the ECD, cynomolgus Fc gamma RIIA shares 89% aa sequence identity with human Fc gamma RIIA. It binds cynomolgus and human IgG subclasses 1-4 as well as human Pentraxin-2, and C-Reactive Protein. It delivers activating signals through its cytoplasmic ITAM sequence. Fc gamma RIIA signaling cooperates with Integrin alpha 2b beta 3 and the CD42b-GP1b-IX-V complex to promote platelet adhesion and activation. Fc gamma RIIA is expressed on monocytes, monocytes, and platelets and additionally on cynomolgus granulocytes.

Predicted N Terminal	Thr29
Form	Lyophilized from a 0.2 µm filtered solution in PBS.
Bio-activity	Measured by its binding ability in a functional ELISA. When Recombinant Cynomolgus Monkey Fc gamma RIIA/CD32a is immobilized on a His Tag Antibody coated plate, it binds Biotinylated Human IgG. The concentration of Biotinylated Human IgG that produces 50% of the optimal binding response is approximately 0.75-3.75 µg/mL.
Molecular Mass	Predicted Molecular Mass: 21 kDa SDS-PAGE: 23-32 kDa, reducing conditions
Endotoxin	<0.1 EU per 1 µg of the protein by the LAL method.
Purity	>95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. 12 months from date of receipt, -20 to -70 centigrade as supplied. 1 month, 2 to 8 centigrade under sterile conditions after reconstitution.

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3 months, -20 to -70 centigrade under sterile conditions after reconstitution.

Reconstitution Reconstitute at 200 µg/mL in PBS.

GENE INFORMATION

Gene Name FCGR2A Fc fragment of IgG receptor IIa [*Macaca fascicularis*]

Official Symbol FCGR2A

Synonyms FCGR2A; Fc fragment of IgG receptor IIa

Gene ID 102143568

mRNA Refseq NM_001283669

Protein Refseq NP_001270598

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