Recombinant Cynomolgus Monkey Fc gamma RIII (CD16)

Catalog Number: 9224-FC

DESCRIPTION

Source	Human embryonic kidney cell, HEK293-derived Gly17-Gln208, with a C-terminal 6-His tag Accession # NP_001270121
N-terminal Sequence Analysis	Gly17, Glu21 and Met18
Predicted Molecular Mass	23 kDa

SPECIFICATIONS

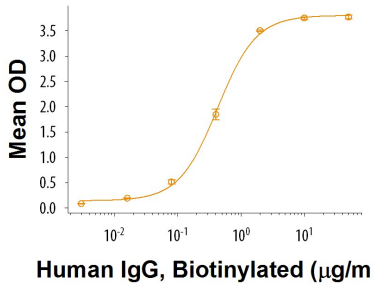
SDS-PAGE	36-44 kDa, reducing conditions
Activity	Measured by its binding ability in a functional ELISA. When Recombinant Cynomolgus Monkey Fc gamma RIII (CD16) was immobilize on a His Tag antibody coated plate, it binds biotinylated Human IgG. The concentration of biotinylated Human IgG that produces 50% of the optimal binding response is approximately 0.15-0.75 µg/mL.
Endotoxin Level	<0.10 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.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 200 µg/mL in PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 3 months, -20 to -70 °C under sterile conditions after reconstitution.

DATA

Binding Activity



When Recombinant Cynomolgus Fc gamma RIII (CD16) (Catalog # 9224-FC) was immobilized on a His Tag antibody (Catalog # MAB050) coated plate, it binds Biotinylated Human IgG with an ED_{50} of 0.15-0.75 µg/mL.

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BACKGROUND

Fcγ RIII/CD16 is a low/intermediate affinity receptor for polyvalent immune-complexed IgG. It is involved in phagocytosis, secretion of enzymes and inflammatory mediators, antibody-dependent cytotoxicity, and clearance of immune complexes (1-3). Mature cynomolgus Fcγ RIII consists of a 192 aa ECD with two C2-type Ig-like domains, a 21 aa transmembrane segment, and a 25 aa cytoplasmic domain (4). In humans, Fcγ RIIIA/CD16a is expressed as a 50-70 kDa transmembrane activating receptor on NK cells, T cells, monocytes, and macrophages (2). It is closely related to the GPI-linked Fcγ RIIIB which is expressed on human neutrophils and eosinophils (1, 3). These two proteins share 97% amino acid (aa) identity within their extracellular domains (ECD) (5). Within the ECD, mature cynomolgus Fcγ RIII shares 92% and 90% aa sequence identity with human Fcγ RIIIA and Fcγ RIIIB, respectively. Fcγ RIII surface expression requires interaction with an accessory chain, either the common γ-chain or CD3ζ (8, 9). Glycosylation patterns, electrophoretic mobility, and binding affinity appear to differ between NK cell and monocyte Fcγ RIIIA (10). Shed forms of both Fcγ RIIIA and Fcγ RIIIB can be generated by proteolytic cleavage and retain binding activity (11-14). Shedding from monocytes and macrophages can be triggered by cell activation or phagocytosis (14). Soluble Fcγ RIII circulates in normal plasma and is elevated in rheumatoid arthritis and in coronary artery diseases (12, 13). Cynomolgus Fcγ RIII binds to cynomolgus IgG subclasses 1-4, to human IgG1 and 3, and more weakly to human IgG2 and 4 (15).

References:

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