

Fc gamma RIIIA/CD16a Protein, Rat (HEK293, His)

Cat. No.:	HY-P75621
Synonyms:	Low affinity immunoglobulin gamma Fc region receptor III-A; FcRIIIa; FcR-10; CD16a; FCGR3A; IGFR3
Species:	Rat
Source:	HEK293
Accession:	XP_008767961.1 (L22-P200)
Gene ID:	304966
Molecular Weight:	28-33 kDa

PROPERTIES

Biological Activity	Measured by its binding ability in a functional ELISA. Immobilized rat FCGR3A-His at 10 µg/mL (100 µl/well) can bind biotinylated human IgG1, The EC ₅₀ of biotinylated human IgG1 is 59.0-139.0 ng/mL.
Appearance	Solution
Formulation	Supplied as a 0.2 µm filtered solution of PBS, pH 7.4.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	N/A.
Storage & Stability	Stored at -80°C for 1 year. It is stable at -20°C for 3 months after opening. It is recommended to freeze aliquots at -80°C for extended storage. Avoid repeated freeze-thaw cycles.
Shipping	Shipping with dry ice

DESCRIPTION

Background	<p>The Fc γ RIIIA/CD16a protein is a receptor for the invariant Fc fragment of immunoglobulin γ (IgG) and is optimally activated upon binding to the aggregation antigen-igg complex displayed on the cell surface, initiating antibody-dependent cytotoxicity (ADCC). Fc γ RIIIA/CD16a mediates IgG effects on natural killer (NK) cells, binding to antigen-igg complexes produced during infection, triggering NK cell-dependent cytokine production and degranulation. Fc γ RIIIA/CD16a plays a crucial role in the generation of memory-like adaptive NK cells, regulating NK cell survival and proliferation, and preventing NK cell progenitor cell apoptosis. Fc γ RIIIA/CD16a plays a role in mediating the antitumor activity of therapeutic antibodies, triggering TNFA-dependent ADCC in IgG-coated tumor cells and enhancing ADCC in response to focused IgG. Fc γ RIIIA/CD16a is involved in pathogenesis through an antibody-dependent enhancement (ADE) mechanism that promotes the entry of the virus into bone marrow cells during secondary infection and subsequent viral replication^{[1][2][3]}.</p>
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Caution: Product has not been fully validated for medical applications. For research use only.

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