CD16a recombinant protein

CatalogNo: YD3074

Key Features

Reactivity
- Human,

Recommended Dilution Ratios

Storage

Storage*	-15°C to -25°C/1 year(Avoid freeze / thaw cycles)
Formulation	Phosphate-buffered solution

Basic Information

Source	Mammalian cells
Purification	Mammalian cells
Purity	>90% as determined by SDS-PAGE

Immunogen Information

Squence	Amino acid:17-208,with human FC tag.

Target Information

Gene name	FCGR3A

Protein Name Low affinity immunoglobulin gamma Fc region receptor III-A (IgG Fc receptor III-A) (CD16-II) (CD16a antigen) (Fc-gamma RIII-alpha) (Fc-gamma RIII) (Fc-gamma RIIIa) (FcRIII) (FcRIIIa) (FcgammaRIIIA) (FcR-10) (IgG Fc receptor III-2) (CD antigen CD16a)

Organism	Gene ID	UniProt ID
Human	2214;	P08637;

Cellular Localization Cell membrane ; Single-pass type I membrane protein . Secreted . Note=Exists also as a soluble receptor. .

Tissue specificity Expressed in natural killer cells (at protein level) (PubMed:2526846). Expressed in a subset of circulating monocytes (at protein level) (PubMed:27670158).

Function Receptor for the invariable Fc fragment of immunoglobulin gamma (IgG). Optimally activated upon binding of clustered antigen-IgG complexes displayed on cell surfaces, triggers lysis of antibody-coated cells, a process known as antibody-dependent cellular cytotoxicity (ADCC). Does not bind free monomeric IgG, thus avoiding inappropriate effector cell activation in the absence of antigenic trigger (PubMed:11711607, PubMed:21768335, PubMed:22023369, PubMed:24412922, PubMed:25786175, PubMed:25816339, PubMed:28652325, PubMed:8609432, PubMed:9242542). Mediates IgG effector functions on natural killer (NK) cells. Binds antigen-IgG complexes generated upon infection and triggers NK cell-dependent cytokine production and degranulation to limit viral load and propagation. Involved in the generation of memory-like adaptive NK cells capable to produce high amounts of IFNG and to efficiently eliminate virus-infected cells via ADCC (PubMed:24412922, PubMed:25786175). Regulates NK cell survival and proliferation, in particular by preventing NK cell progenitor apoptosis (PubMed:29967280, PubMed:9916693). Fc-binding subunit that associates with CD247 and/or FCER1G adapters to form functional signaling complexes. Following the engagement of antigen-IgG complexes, triggers phosphorylation of immunoreceptor tyrosine-based activation motif (ITAM)-containing adapters with subsequent activation of phosphatidylinositol 3-kinase signaling and sustained elevation of intracellular calcium that ultimately drive NK cell activation. The ITAM-dependent signaling coupled to receptor phosphorylation by PKC mediates robust intracellular calcium flux that leads to production of pro-inflammatory cytokines, whereas in the absence of receptor phosphorylation it mainly activates phosphatidylinositol 3-kinase signaling leading to cell degranulation (PubMed:1825220, PubMed:23024279, PubMed:2532305). Costimulates NK cells and trigger lysis of target cells independently of IgG binding (PubMed:10318937, PubMed:23006327). Mediates the antitumor activities of therapeutic antibodies. Upon ligation on monocytes triggers TNFA-dependent ADCC of IgG-coated tumor cells (PubMed:27670158). Mediates enhanced ADCC in response to afucosylated IgGs (PubMed:34485821).; (Microbial infection) Involved in Dengue virus pathogenesis via antibody-dependent enhancement (ADE) mechanism. Secondary infection with Dengue virus triggers elevated levels of afucosylated non-neutralizing IgG1s with reactivity to viral envelope/E protein. Viral antigen-IgG1 complexes bind with high affinity to FCGR3A, facilitating virus entry in myeloid cells and subsequent viral replication.

Validation Data

Contact information

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Please scan the QR code to access additional product information:
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