

Anti-FcγR3a / CD16a Reference Antibody (AFM13)

Recombinant Antibody
Catalog # APR10729

Product Information

Application	FC, Kinetics, Animal Model
Primary Accession	P08637
Reactivity	Human
Clonality	Monoclonal
Isotype	IgG2SA
Calculated MW	29089

Additional Information

Target/Specificity	FcγR3a / CD16a
Endotoxin Conjugation	Unconjugated
Expression system	CHO Cell
Format	Purified monoclonal antibody supplied in PBS, pH6.0, without preservative. This antibody is purified through a protein A column.

Protein Information

Name	FCGR3A {ECO:0000303 PubMed:23006327}
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). 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 opsonisation and ADCC in response to afucosylated IgGs (PubMed:[34485821](#), PubMed:[28566370](#)).

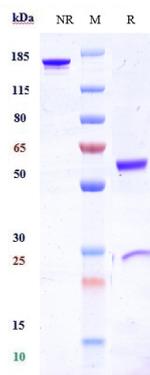
Cellular Location

Cell membrane; Single-pass type I membrane protein. Secreted. Note=Also exists as a soluble receptor

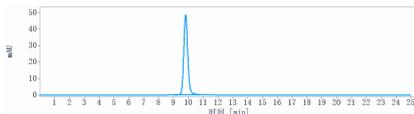
Tissue Location

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

Images



Anti-FcγR3a / CD16a Reference Antibody (AFM13) on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 95%



The purity of Anti-FcγR3a / CD16a Reference Antibody (AFM13) is more than 99.55% ,determined by SEC-HPLC.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.