

# Anti-FcγR3a / CD16a Reference Antibody (AFM13)

Recombinant Antibody  
Catalog # APR10729

## Product Information

Application	FC, Kinetics, Animal Model
Primary Accession	<a href="#">P08637</a>
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	<p>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:<a href="#">11711607</a>, PubMed:<a href="#">21768335</a>, PubMed:<a href="#">22023369</a>, PubMed:<a href="#">24412922</a>, PubMed:<a href="#">25786175</a>, PubMed:<a href="#">25816339</a>, PubMed:<a href="#">28652325</a>, PubMed:<a href="#">8609432</a>, PubMed:<a href="#">9242542</a>). 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:<a href="#">24412922</a>, PubMed:<a href="#">25786175</a>). Regulates NK cell survival and proliferation, in particular by preventing NK cell progenitor apoptosis (PubMed:<a href="#">29967280</a>, PubMed:<a href="#">9916693</a>). 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</p>

(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](#)).

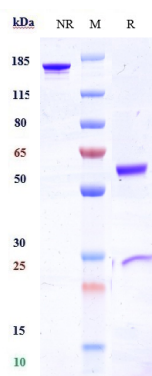
## Cellular Location

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

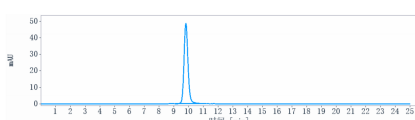
## Tissue Location

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.

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