

**Anti-FcγR3a / CD16a Reference Antibody (AFM13)**  
**Recombinant Antibody**  
**Catalog # APR10729**

**Specification**

---

**Anti-FcγR3a / CD16a Reference Antibody (AFM13) - Product Information**

Application	FC, E, FTA
Primary Accession	<a href="#">P08637</a>
Reactivity	Human
Clonality	Monoclonal
Isotype	IgG2SA
Calculated MW	124.56 KDa

**Anti-FcγR3a / CD16a Reference Antibody (AFM13) - Additional Information**

**Target/Specificity**  
FcγR3a / CD16a

**Endotoxin**  
< 0.001EU/ μg, determined by LAL method.

**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.

**Storage**  
-80°C for 2 years under sterile conditions □ -20°C for 1 year under sterile conditions □ Avoid repeated freeze-thaw cycles.

**Anti-FcγR3a / CD16a Reference Antibody (AFM13) - 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](http://www.uniprot.org/citations/11711607), PubMed: [21768335](http://www.uniprot.org/citations/21768335), PubMed: [22023369](http://www.uniprot.org/citations/22023369), PubMed: [24412922](http://www.uniprot.org/citations/24412922))

target="\_blank">24412922</a>, PubMed:<a href="http://www.uniprot.org/citations/25786175" target="\_blank">25786175</a>, PubMed:<a href="http://www.uniprot.org/citations/25816339" target="\_blank">25816339</a>, PubMed:<a href="http://www.uniprot.org/citations/28652325" target="\_blank">28652325</a>, PubMed:<a href="http://www.uniprot.org/citations/8609432" target="\_blank">8609432</a>, PubMed:<a href="http://www.uniprot.org/citations/9242542" target="\_blank">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="http://www.uniprot.org/citations/24412922" target="\_blank">24412922</a>, PubMed:<a href="http://www.uniprot.org/citations/25786175" target="\_blank">25786175</a>). Regulates NK cell survival and proliferation, in particular by preventing NK cell progenitor apoptosis (PubMed:<a href="http://www.uniprot.org/citations/29967280" target="\_blank">29967280</a>, PubMed:<a href="http://www.uniprot.org/citations/9916693" target="\_blank">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 (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:<a href="http://www.uniprot.org/citations/1825220" target="\_blank">1825220</a>, PubMed:<a href="http://www.uniprot.org/citations/23024279" target="\_blank">23024279</a>, PubMed:<a href="http://www.uniprot.org/citations/2532305" target="\_blank">2532305</a>). Costimulates NK cells and trigger lysis of target cells independently of IgG binding (PubMed:<a href="http://www.uniprot.org/citations/10318937" target="\_blank">10318937</a>, PubMed:<a href="http://www.uniprot.org/citations/23006327" target="\_blank">23006327</a>). Mediates the antitumor activities of therapeutic antibodies. Upon ligation on monocytes triggers TNFA-dependent ADCC of IgG-coated tumor cells (PubMed:<a href="http://www.uniprot.org/citations/27670158" target="\_blank">27670158</a>). Mediates enhanced ADCC in response to afucosylated IgGs (PubMed:<a href="http://www.uniprot.org/citations/34485821" target="\_blank">34485821</a>).

#### Cellular Location

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

#### Tissue Location

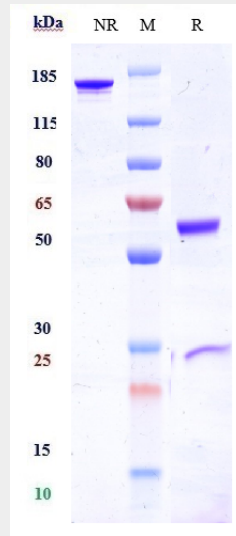
Expressed in natural killer cells (at protein level) (PubMed:2526846). Expressed in a subset of circulating monocytes (at protein level) (PubMed:27670158).

### Anti-FcγR3a / CD16a Reference Antibody (AFM13) - Protocols

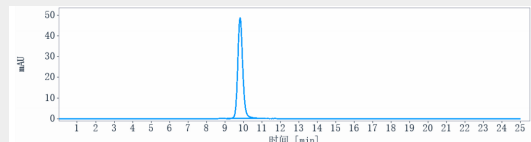
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

## Anti-FcγR3a / CD16a Reference Antibody (AFM13) - 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.