

# Anti-FCGR3A / CD16A Antibody

Rabbit Anti Human Polyclonal Antibody  
Catalog # ALS18334

## Product Information

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<b>Application</b>	WB, IHC-P
<b>Primary Accession</b>	<a href="#">P08637</a>
<b>Predicted</b>	Human, Mouse
<b>Host</b>	Rabbit
<b>Clonality</b>	Polyclonal
<b>Isotype</b>	IgG
<b>Calculated MW</b>	29089

## Additional Information

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<b>Gene ID</b>	2214
<b>Alias Symbol</b> <b>Other Names</b>	FCGR3A FCGR3A, CD16A, CD16a antigen, CD16, FcgammaRIIIA, FCR-10, FCRIII, Fc gamma receptor III-A, Fc-gamma RIII, Fc-gamma RIII-alpha, FCG3, IGFR3, Fc-gamma riii, Fc-gamma receptor IIIb (CD16), Fc-gamma RIIIa, FCGR3, FCRIIIA, Neutrophil-specific antigen NA, ...
<b>Target/Specificity</b>	Human FCGR3A / CD16A
<b>Reconstitution &amp; Storage</b>	Affinity purified
<b>Precautions</b>	Anti-FCGR3A / CD16A Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

## Protein Information

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<b>Name</b>	FCGR3A {ECO:0000303   PubMed:23006327}
<b>Function</b>	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:[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).

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