

CD16 Rabbit mAb

Catalog # AP78175

Product Information

Application	WB, IF, FC, ICC
Primary Accession	P08637
Reactivity	Rat, Human, Mouse
Host	Rabbit
Clonality	Monoclonal Antibody
Isotype	IgG
Conjugate	Unconjugated
Immunogen	A synthesized peptide derived from human CD16
Purification	Affinity Chromatography
Calculated MW	29089

Additional Information

Gene ID	2214
Other Names	FCGR3A
Dilution	WB~1/500-1/1000 IF~1:50~200 FC~1:10~50 ICC~N/A
Format	Liquid in 10mM PBS, pH 7.4, 150mM sodium chloride, 0.05% BSA, 0.02% sodium azide and 50% glycerol.
Storage	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.

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](#)).

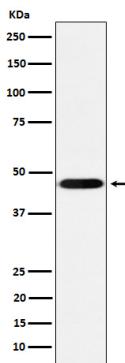
Cellular Location

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



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