

CD16 / Fc-gamma Receptor III Antibody - With BSA and Azide
Mouse Monoclonal Antibody [Clone ICO-116]
Catalog # AH11212

Specification

CD16 / Fc-gamma Receptor III Antibody - With BSA and Azide - Product Information

Application	,3,4,
Primary Accession	P08637
Other Accession	2214 , 372679
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	Mouse / IgG1, kappa
Calculated MW	50-80kDa KDa

CD16 / Fc-gamma Receptor III Antibody - With BSA and Azide - Additional Information

Gene ID 2214

Other Names

Low affinity immunoglobulin gamma Fc region receptor III-A, CD16a antigen, Fc-gamma RIII-alpha, Fc-gamma RIII, Fc-gamma RIIIa, FcRIII, FcRIIIa, FcR-10, IgG Fc receptor III-2, CD16a, FCGR3A, CD16A, FCG3, FCGR3, IGFR3

Storage

Store at 2 to 8°C. Antibody is stable for 24 months.

Precautions

CD16 / Fc-gamma Receptor III Antibody - With BSA and Azide is for research use only and not for use in diagnostic or therapeutic procedures.

CD16 / Fc-gamma Receptor III Antibody - With BSA and Azide - 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), PubMed: [25786175](http://www.uniprot.org/citations/25786175), PubMed: [25816339](http://www.uniprot.org/citations/25816339), PubMed: [28652325](http://www.uniprot.org/citations/28652325), PubMed: [8609432](http://www.uniprot.org/citations/8609432))

target="_blank">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). 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: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=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).

CD16 / Fc-gamma Receptor III Antibody - With BSA and Azide - 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](#)

CD16 / Fc-gamma Receptor III Antibody - With BSA and Azide - Images

CD16 / Fc-gamma Receptor III Antibody - With BSA and Azide - Background

It recognizes CD16 (FcγRIII), the low-affinity receptor for IgG with an apparent molecular weight of 50-80kDa. Two similar genes represent CD16, CD16A (FcγRIIIA), which exists as a hetero-oligomeric polypeptide-anchored form in macrophages and NK cells and CD16B (FcγRIIIB), which exist as a monomeric GPI-anchored form in neutrophils. Furthermore, there are two known polymorphisms of CD16B, NA-1 and NA-2. Individuals homozygous for NA-2 show a lower phagocytic capacity compared with NA-1. CD16 binds IgG in the form of immune complexes and shows preferential binding of IgG1 and IgG3 isotypes and minimal binding of IgG2 and IgG4. Upon IgG binding, both CD16 isoforms initiate signal transduction cascades that lead to a variety of responses including antibody-dependent cell-mediated cytotoxicity (ADCC), phagocytosis, degranulation and proliferation.

CD16 / Fc-gamma Receptor III Antibody - With BSA and Azide - References

Knapp W. et al. (eds) Leukocyte Typing IV, Oxford University Press, Oxford, 1989. | Lanier LL et al. Functional properties of a unique subset of cytotoxic CD3+ T lymphocytes that express Fc receptors for IgG (CD16/Leu-11 antigen). J Exp Med 1985, 162(6):2089-2106