

## Anti-Fc gamma receptor III [3G8] Standard Size Ab00754-23.0

This chimeric rabbit antibody was made using the variable domain sequences of the original Mouse IgG1 format, for improved compatibility with existing reagents, assays and techniques.

**Isotype and Format:** Rabbit IgG, Kappa

**Clone Number:** 3G8

**Alternative Name(s) of Target:** CD16; low affinity IgG receptor III; FcγRIII; low affinity FcγRIII

**UniProt Accession Number of Target Protein:** Q9ULV2

**Published Application(s):** Depletion, IP, SPR, Block, FC, IHC

**Published Species Reactivity:** Baboon, Capuchin Monkey, chimpanzee, Cotton-topped Tamarin, Cynomolgus, Marmoset, Pigtailed Macaque, Rhesus, Sooty Mangabey, Squirrel Monkey, Human

**Immunogen:** 3G8 was prepared by immunizing mice with human PMN (polymorphonuclear leukocytes) cells.

**Specificity:** 3G8 binds to CD16 at an epitope which is not the IgG-binding site. This antibody cannot distinguish between CD16a transmembrane isoform found on the surface of NK cells and macrophages (which can trigger the cytolytic response), and the GPI-linked CD16b isoform present on neutrophils or soluble CD16 found in the plasma. CD16 is the low affinity IgG receptor III and binds to aggregated IgG or IgG-antigen complex which functions in NK cell activation, phagocytosis and ADCC (antibody-dependent cell-mediated cytotoxicity).

**Application Notes:** 3G8 antibody was used to construct a recombinant bispecific scFv (bsscFv) along with the mAb clone F3.3 anti-HLA class II antibody (connected by a (Gly4Ser)<sub>4</sub> linker) which was expressed in SF21 insect cells. This bsscFv allows NK cells to target malignant B lymphoid cells and mediates effector cell lysis (ASCC) of the malignant cells (also lysis of primary leukaemia samples). 3G8 is also able to block neutrophil phagocytosis and stimulates NK cell proliferation, and can be used in FC, SPR, IP and IHC studies.

**Antibody First Published in:** Bruenke et al. A recombinant bispecific single-chain Fv antibody against HLA class II and FcγRIII (CD16) triggers effective lysis of lymphoma cells. Br J Haematol. 2004 Apr;125(2):167-79. [PMID:15059139](#)

**Note on publication:** Describes the construction and characterisation of recombinant bsscFv capable of targeting CD16+ immune cells to malignant B cells resulting in ADCC.

## Product Form

**Size:** 200 µg Purified antibody.

**Purification:** Protein A affinity purified

**Supplied In:** PBS with 0.02% Proclin 300.

**Storage Recommendation:** Store at 4°C for up to 3 months. For longer storage, aliquot and store at -20°C.

**Concentration:** 1 mg/ml.

Important note – This product is for research use only. It is not intended for use in therapeutic or diagnostic procedures for humans or animals.