**BACKGROUND**

CD16, the low affinity Fcγ receptor III for IgG (FcγRIII), exists as a polypeptide-anchored form (FcγRIIIA or CD16-A) in human natural killer cells and macrophages and as a glycosylphosphatidylinositol-anchored form (FcγRIIIB or CD16-B) in neutrophils. CD16-A requires association of the γ subunit of FcεRI or the ζ subunit of the TCR-CD3 complex for cell surface expression. The CD16-B is polymorphic and the two alleles are termed NA1 and NA2. CD16 is one of only four eukaryotic receptors known to exist natively in both the transmembrane (TM, CD16-A) and glycosylphosphatidylinositol (GPI, CD16-B) isoforms. Patients with paroxysmal nocturnal hemoglobinuria (PNH) have only about 10% of the normal levels of CD16 on their neutrophils, whereas the expression of FcRII is unaffected. Analysis of FcRIII expression in cells of PNH patients, known to be deficient in PI-linked proteins, suggests FcRIII is not PI-linked in monocytes.

**CHROMOSOMAL LOCATION**

Genetic locus: FCGR3A (human) mapping to 1q23.3.

**SOURCE**

CD16 (3G8) is a mouse monoclonal antibody raised against human leukocytes.

**PRODUCT**

Each vial contains 200 µg IgG1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CD16 (3G8) is available conjugated to agarose (sc-19620 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-19620 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-19620 PE), fluorescein (sc-19620 FITC), Alexa Fluor® 488 (sc-19620 AF488), Alexa Fluor® 546 (sc-19620 AF546), Alexa Fluor® 594 (sc-19620 AF594) or Alexa Fluor® 647 (sc-19620 AF647), 200 µg/ml, for WB (RGB), IF, IF(P) and FCM; and to either Alexa Fluor® 680 (sc-19620 AF680) or Alexa Fluor® 790 (sc-19620 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

**APPLICATIONS**

CD16 (3G8) is recommended for detection of CD16 of human origin by immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x 10^6 cells).

CD16 (3G8) is also recommended for detection of CD16 in additional species, including primates.

Suitable for use as control antibody for CD16 siRNA (h): sc-42758, CD16 shRNA Plasmid (h): sc-42758-SH and CD16 shRNA (h) Lentiviral Particles: sc-42758-V.

Molecular Weight of CD16: 50-100 kDa.

**RECOMMENDED SUPPORT REAGENTS**

To ensure optimal results, the following support reagents are recommended:

1) Immunofluorescence: use m-IgGk BP-FITC: sc-516140 or m-IgGk BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

**STORAGE**

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

**DATA**

**SELECT PRODUCT CITATIONS**


**RESEARCH USE**

For research use only, not for use in diagnostic procedures.