

# CD16 (3G8): sc-19620

## BACKGROUND

CD16, the low affinity Fc  $\gamma$  receptor III for IgG (Fc  $\gamma$  RIII), exists as a polypeptide-anchored form (Fc  $\gamma$  RIIA or CD16-A) in human natural killer cells and macrophages and as a glycosylphosphatidylinositol-anchored form (Fc  $\gamma$  RIIB or CD16-B) in neutrophils. CD16-A requires association of the  $\gamma$  subunit of Fc  $\epsilon$  RI or the  $\zeta$  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 haemoglobinuria (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  $\mu$ g IgG $_1$  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  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-19620 HRP), 200  $\mu$ g/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  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-19620 AF680) or Alexa Fluor® 790 (sc-19620 AF790), 200  $\mu$ g/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  $\mu$ g per  $1 \times 10^6$  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.

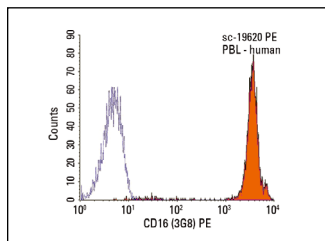
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: Immunofluorescence: use m-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  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



CD16 (3G8) PE: sc-19620 PE. FCM analysis of human peripheral blood leukocytes. Black line histogram represents the isotype control, normal mouse IgG $_1$ -PE: sc-2866.

## SELECT PRODUCT CITATIONS

- Peyron, P., et al. 2000. Nonopsonic phagocytosis of *Mycobacterium kansasii* by human neutrophils depends on cholesterol and is mediated by CR3 associated with glycosylphosphatidylinositol-anchored proteins. *J. Immunol.* 165: 5186-5191.
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- Liu, M., et al. 2011. Vitellogenin mediates phagocytosis through interaction with Fc $\gamma$ R. *Mol. Immunol.* 49: 211-218.
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- Borinskaya, S., et al. 2016. Integration of linear and dendritic Actin nucleation in Nck-induced Actin comets. *Mol. Biol. Cell* 27: 247-259.
- Kums, J., et al. 2017. Quantitative analysis of cell surface antigen-antibody interaction using *Gaussia princeps* luciferase antibody fusion proteins. *MAbs* 9: 506-520.
- Martin, C.E., et al. 2018. ShcA adaptor protein promotes nephrin endocytosis and is upregulated in proteinuric nephropathies. *J. Am. Soc. Nephrol.* 29: 92-103.
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## RESEARCH USE

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

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