

CD16 (H-80): sc-20627

BACKGROUND

CD16, the low affinity Fc γ receptor III for IgG (Fc γ RIII), exists as a polypeptide-anchored form (Fc γ RIIIA or CD16-A) in human natural killer cells and macrophages and as a glycosylphosphatidylinositol-anchored form (Fc γ RIIIB or CD16-B) in neutrophils. CD16-A requires association of the γ subunit of Fc ϵ RI 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 haemoglobinuria (PNH) have only about 10% of the normal levels of CD16 on their neutrophils, whereas the expression of FcRIII 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/FCGR3B (human) mapping to 1q23.3.

SOURCE

CD16 (H-80) is a rabbit polyclonal antibody raised against amino acids 131-210 mapping near the C-terminus of CD16 of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

APPLICATIONS

CD16 (H-80) is recommended for detection of CD16-A and CD16-B of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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.

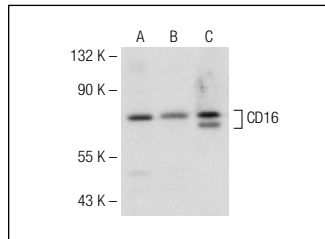
Molecular Weight of CD16: 50-100 kDa.

Positive Controls: U-937 cell lysate: sc-2239, K-562 whole cell lysate: sc-2203 or JEG-3 whole cell lysate: sc-364255.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



CD16 (H-80): sc-20627. Western blot analysis of CD16 expression in K-562 (A), U-937 (B) and JEG-3 (C) whole cell lysates.

SELECT PRODUCT CITATIONS

- Singh, A.K., et al. 2003. Lipopolysaccharide (LPS) induced activation of the immune system in control rats and rats chronically exposed to a low level of the organothiophosphate insecticide, acephate. *Toxicol. Ind. Health* 19: 93-108.
- Ichiyama, T., et al. 2004. Intravenous immunoglobulin inhibits NF κ B activation and affects Fc γ receptor expression in monocytes/macrophages. *Naunyn Schmiedebergs Arch. Pharmacol.* 369: 428-433.
- Guan, G., et al. 2005. Estrogenic effect on swelling and monocytic receptor expression in an arthritic temporomandibular joint model. *J. Steroid Biochem. Mol. Biol.* 97: 241-250.
- Mountziaris, P.M., et al. 2012. Intra-articular controlled release of anti-inflammatory siRNA with biodegradable polymer microparticles ameliorates temporomandibular joint inflammation. *Acta Biomater.* 8: 3552-3560.
- Wang, Y., et al. 2013. ADAM17 cleaves CD16b (Fc γ RIIIb) in human neutrophils. *Biochim. Biophys. Acta* 1833: 680-685.


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