

CD16 (2Q1240): sc-70548

BACKGROUND

CD16, the low affinity Fc γ receptor III for IgG (Fc γ RIII), exists as a polypeptide-anchored form (Fc γ RIIA or CD16-A) in human natural killer cells and macrophages and as a glycosylphosphatidylinositol-anchored form (Fc γ RIIB 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 (human) mapping to 1q23.3.

SOURCE

CD16 (2Q1240) is a mouse monoclonal antibody raised against CD16 of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain 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.

PROTOCOLS

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

APPLICATIONS

CD16 (2Q1240) is recommended for detection of CD16 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 μ g per 1×10^6 cells).

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.

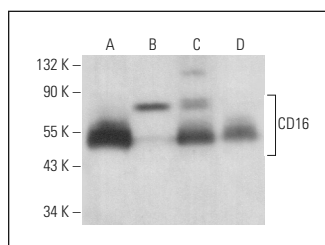
Molecular Weight of CD16: 50-100 kDa.

Positive Controls: Raji whole cell lysate: sc-364236, U266 whole cell lysate: sc-364800 or CD16 (h): 293T Lysate: sc-114183.

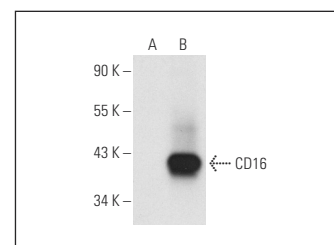
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker[™] Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 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 m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgG κ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



CD16 (2Q1240): sc-70548. Western blot analysis of CD16 expression in CCRF-HSB-2 (A), Raji (B), U266 (C) and JMI1 (D) whole cell lysates.



CD16 (2Q1240): sc-70548. Western blot analysis of CD16 expression in non-transfected: sc-117752 (A) and human CD16 transfected: sc-114183 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

- Peternel, S., et al. 2011. Increased expression of TRAIL and its death receptors DR4 and DR5 in plaque psoriasis. Arch. Dermatol. Res. 303: 389-397.
- Xu, H., et al. 2012. The intrahepatic expression and distribution of BTLA and its ligand HVEM in patients with HBV-related acute-on-chronic liver failure. Diagn. Pathol. 7: 142.
- Wojtal, K.A., et al. 2012. Fc γ receptor CD64 modulates the inhibitory activity of infliximab. PLoS ONE 7: e43361.
- Liu, H., et al. 2015. Specific growth inhibition of ErbB2-expressing human breast cancer cells by genetically modified NK-92 cells. Oncol. Rep. 33: 95-102.

RESEARCH USE

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



See **CD16 (DJ130c): sc-20052** for CD16 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor[®] 488, 546, 594, 647, 680 and 790.