

CD16 (ASH 1975): sc-52376

BACKGROUND

CD16, known as CD16-2 in rodents, exists both 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. CD16-B is polymorphic; 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 FcR11 is unaffected. Analysis of FcR11 expression in cells of PNH patients, known to be deficient in PI-linked proteins, suggests FcR11 is not PI-linked in monocytes.

CHROMOSOMAL LOCATION

Genetic locus: FCGR3A (human) mapping to 1q23.3; Fcgr4 (mouse) mapping to 1 H3.

SOURCE

CD16 (ASH 1975) is a mouse monoclonal antibody raised against whole cells of human origin.

PRODUCT

Each vial contains 200 μg IgG_{2a} in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

CD16 (ASH 1975) is recommended for detection of CD16 of human origin and CD16-2 of mouse and rat origin by immunoprecipitation [1-2 μg per 100-500 μg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 μg per 1 x 10⁶ cells).

Suitable for use as control antibody for CD16 siRNA (h): sc-42758, CD16-2 siRNA (m): sc-42759, CD16 shRNA Plasmid (h): sc-42758-SH, CD16-2 shRNA Plasmid (m): sc-42759-SH, CD16 shRNA (h) Lentiviral Particles: sc-42758-V and CD16-2 shRNA (m) Lentiviral Particles: sc-42759-V.

Molecular Weight of CD16: 50-100 kDa.

Positive Controls: human platelet extract: sc-363773 or NK-92 whole cell lysate: sc-364788.

STORAGE

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

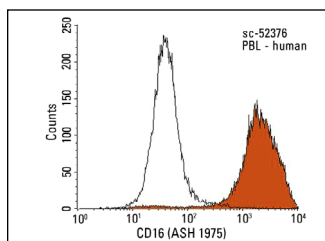
PROTOCOLS

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

RESEARCH USE

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

DATA



CD16 (ASH 1975): sc-52376. Indirect FCM analysis of human peripheral blood leukocytes stained with CD16 (ASH 1975), followed by PE-conjugated goat anti-mouse IgG_{2a}: sc-3765. Black line histogram represents the isotype control, normal mouse IgG_{2a}: sc-3878.

SELECT PRODUCT CITATIONS

- Fernandez-Vizarrá, P., et al. 2012. Immunoglobulin G Fc receptor deficiency prevents Alzheimer-like pathology and cognitive impairment in mice. *Brain* 135: 2826-2837.
- Silwal, P., et al. 2012. Dexamethasone induces FcγRIIb expression in RBL-2H3 cells. *Korean J. Physiol. Pharmacol.* 16: 393-398.
- Edri-Brami, M., et al. 2012. Glycans in sera of amyotrophic lateral sclerosis patients and their role in killing neuronal cells. *PLoS ONE* 7: e35772.
- Li, X., et al. 2018. Andrographolide ameliorates intracerebral hemorrhage induced secondary brain injury by inhibiting neuroinflammation induction. *Neuropharmacology* 141: 305-315.
- Chen, Z., et al. 2019. Interleukin-33 reduces neuronal damage and white matter injury via selective microglia M2 polarization after intracerebral hemorrhage in rats. *Brain Res. Bull.* 150: 127-135.
- Yamaguchi, I., et al. 2019. Downregulation of PD-L1 via FKBP5 by celecoxib augments antitumor effects of PD-1 blockade in a malignant glioma model. *Neurooncol. Adv.* 2: vdz058.
- Sen, T., et al. 2020. Aberrant ER-stress induced neuronal-IFNβ elicits white matter injury due to microglial activation and T-cell infiltration after TBI. *J. Neurosci.* 40: 424-446.
- Luo, X.Q., et al. 2021. Flagellin alleviates airway allergic response by stabilizing eosinophils through modulating oxidative stress. *J. Innate Immun.* 13: 333-344.

CONJUGATES

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