

CD64 (10.1): sc-1184

BACKGROUND

Three different classes of IgG Fc receptors have been described: Fc γ RI (CD64), Fc γ RII (CD32) and Fc γ RIII (CD16). The low affinity receptors, CD64 and CD16, have a putative role in mediating humoral immune responses. CD64 is a surface glycoprotein with high affinity for monomeric IgG, is expressed constitutively on monocytes and macrophages, and can be induced in neutrophils subsequent to IFN- γ stimulation. CD64 plays a putative role in the initiation of cell-mediated cytotoxicity. Thus far, three genes encoding four distinct CD64 transcripts have been described. CD64 has been shown to associate with signal transducing subunit of the high affinity IgE receptor. Src family kinases Hck and Lyn show increased kinase activity and will co-immunoprecipitate with CD64 subsequent to receptor cross linking.

CHROMOSOMAL LOCATION

Genetic locus: FCGR1A (human) mapping to 1q21.2.

SOURCE

CD64 (10.1) is a mouse monoclonal antibody raised against human rheumatoid synovial fluid cells/monocytes.

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.

CD64 (10.1) is available conjugated to agarose (sc-1184 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-1184 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-1184 PE), fluorescein (sc-1184 FITC), Alexa Fluor[®] 488 (sc-1184 AF488), Alexa Fluor[®] 546 (sc-1184 AF546), Alexa Fluor[®] 594 (sc-1184 AF594) or Alexa Fluor[®] 647 (sc-1184 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-1184 AF680) or Alexa Fluor[®] 790 (sc-1184 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

CD64 (10.1) is recommended for detection of CD64 cell surface marker 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 flow cytometry (1 μ g per 1 x 10⁶ cells).

Suitable for use as control antibody for CD64 siRNA (h): sc-35017, CD64 shRNA Plasmid (h): sc-35017-SH and CD64 shRNA (h) Lentiviral Particles: sc-35017-V.

Molecular Weight of CD64: 43 kDa.

Positive Controls: HL-60 whole cell lysate: sc-2209 or human PBL whole cell lysate.

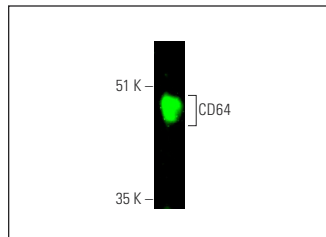
STORAGE

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

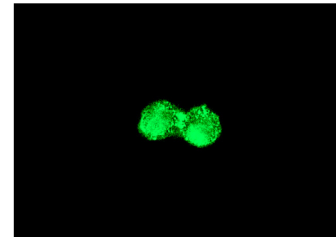
RESEARCH USE

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

DATA



CD64 (10.1): sc-1184. Near-infrared western blot analysis of CD64 expression in human PBL whole cell lysate. Blocked with UltraCruz[®] Blocking Reagent: sc-516214. Detection reagent used: m-IgGκ BP-CFL 680: sc-516180.



CD64 (10.1): sc-1184. Immunofluorescence staining of methanol-fixed THP-1 cells showing membrane staining.

SELECT PRODUCT CITATIONS

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- Lee, H., et al. 2013. Activation of human synovial mast cells from rheumatoid arthritis or osteoarthritis patients in response to aggregated IgG through Fc γ receptor I and Fc γ receptor II. *Arthritis Rheum.* 65: 109-119.
- Zhou, J., et al. 2015. CD14^{hi}CD16⁺ monocytes phagocytose antibody-opsonised *Plasmodium falciparum* infected erythrocytes more efficiently than other monocyte subsets, and require CD16 and complement to do so. *BMC Med.* 13: 154.
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PROTOCOLS

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