

CD71 (H-300): sc-9099



The Power to Question

BACKGROUND

CD71, also known as the transferrin receptor (TFR), is a type II membrane glycoprotein that exists as a disulfide-linked homodimer of two identical subunits. CD71 binds to two molecules of transferrin and a serum iron-transport protein, and directs the cellular uptake of iron via receptor-mediated endocytosis. CD71 is expressed, typically at high levels, on all proliferating cells, reticulocytes and erythroid precursors. It is not expressed on resting leukocytes, but is upregulated upon activation of lymphocytes, monocytes and macrophages. CD71 is also found on most dividing cells and on brain endothelium. A second transferrin receptor, TFR2, also mediates the uptake of transferrin-bound iron. TFR2 is a two-subunit homodimer and is highly expressed in liver as well as in hepatocytes and erythroid precursors. Mutations in the TFR2 gene result in hereditary hemochromatosis type III (HFE3), an iron overloading disorder predominant in Caucasians.

CHROMOSOMAL LOCATION

Genetic locus: TFRC (human) mapping to 3q29; Tfr (mouse) mapping to 16 B3.

SOURCE

CD71 (H-300) is a rabbit polyclonal antibody raised against amino acids 461-760 of CD71 of human origin.

PRODUCT

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

APPLICATIONS

CD71 (H-300) is recommended for detection of CD71 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for CD71 siRNA (h): sc-37070, CD71 siRNA (m): sc-37071, CD71 shRNA Plasmid (h): sc-37070-SH, CD71 shRNA Plasmid (m): sc-37071-SH, CD71 shRNA (h) Lentiviral Particles: sc-37070-V and CD71 shRNA (m) Lentiviral Particles: sc-37071-V.

Molecular Weight of CD71 dimer: 85-95/190 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, Jurkat + PMA cell lysate: sc-24718 or Jurkat + IL-2 cell lysate: sc-2278.

STORAGE

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

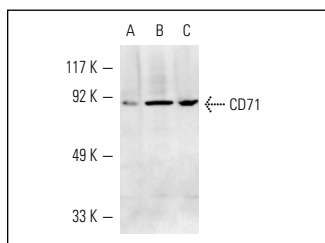
PROTOCOLS

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

RESEARCH USE

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

DATA



CD71 (H-300): sc-9099. Western blot analysis of CD71 expression in untreated (A), PMA-treated (B) and IL-2-treated (C) Jurkat whole cell lysates.

SELECT PRODUCT CITATIONS

- O'Kelly, I., et al. 2002. Forward transport. 14-3-3 binding overcomes retention in endoplasmic reticulum by dibasic signals. *Cell* 111: 577-588.
- Wang, E., et al. 2006. Identification of the segments of the mouse transferrin receptor 1 required for mouse mammary tumor virus infection. *J. Biol. Chem.* 281: 10243-10249.
- Zhu, D., et al. 2006. Lipid rafts serve as a signaling platform for nicotinic acetylcholine receptor clustering. *J. Neurosci.* 26: 4841-4851.
- Ortiz-Zapater, E., et al. 2006. Trafficking of the human transferrin receptor in plant cells: effects of tyrphostin A23 and brefeldin A. *Plant J.* 48: 757-770.
- Sweet, L., et al. 2010. Mannose receptor-dependent delay in phagosome maturation by *Mycobacterium avium* glycopeptidolipids. *Infect. Immun.* 78: 518-526.
- Ramakrishnan, P., et al. 2011. Sam68 is required for both NFκB activation and apoptosis signaling by the TNF receptor. *Mol. Cell* 43: 167-179.
- Jian, J., et al. 2011. SRC regulates TYR20 phosphorylation of transferrin receptor-1 and potentiates breast cancer cell survival. *J. Biol. Chem.* 286: 35708-35715.
- Fernández-Muñoz, B., et al. 2011. The transmembrane domain of podoplanin is required for its association with lipid rafts and the induction of epithelial-mesenchymal transition. *Int. J. Biochem. Cell Biol.* 43: 886-896.
- Zhu, Y.Z., et al. 2012. Association of heat-shock protein 70 with lipid rafts is required for Japanese encephalitis virus infection in Huh7 cells. *J. Gen. Virol.* 93: 61-71.



Try **CD71 (3B8 2A1): sc-32272** or **CD71 (YTA 74.4): sc-59112**, our highly recommended monoclonal alternatives to CD71 (H-300). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **CD71 (3B8 2A1): sc-32272**.