

## CD71 (H68.4): sc-65882



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: TFR2 (human) mapping to 3q29; Tfrc (mouse) mapping to 16 B3.

## SOURCE

CD71 (H68.4) is a mouse monoclonal antibody raised against purified CD71 glycoprotein of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CD71 (H68.4) is available conjugated to agarose (sc-65882 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-65882 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-65882 PE), fluorescein (sc-65882 FITC), Alexa Fluor® 488 (sc-65882 AF488), Alexa Fluor® 546 (sc-65882 AF546), Alexa Fluor® 594 (sc-65882 AF594) or Alexa Fluor® 647 (sc-65882 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-65882 AF680) or Alexa Fluor® 790 (sc-65882 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

## APPLICATIONS

CD71 (H68.4) 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x 10<sup>6</sup> cells).

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: 85-95 kDa.

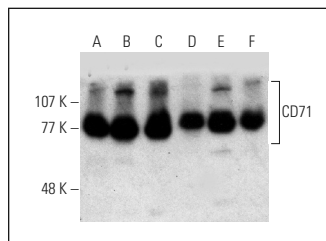
Molecular Weight of CD71 dimer: 190 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206, Jurkat whole cell lysate: sc-2204 or K-562 whole cell lysate: sc-2203.

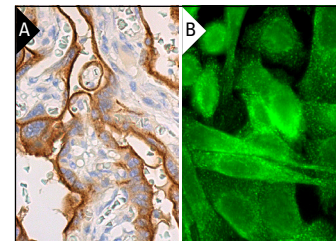
## STORAGE

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

## DATA



CD71 (H68.4): sc-65882 HRP. Direct western blot analysis of CD71 expression in MCF7 (A), Jurkat (B), K-562 (C), M1 (D), L6 (E) and HL-60 (F) whole cell lysates.



CD71 (H68.4): sc-65882. Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta tissue showing membrane and cytoplasmic staining of trophoblastic cells (A). CD71 (H68.4) Alexa Fluor® 488: sc-65882 AF488. Direct immunofluorescence staining of formalin-fixed SW480 cells showing membrane and cytoplasmic localization. Blocked with UltraCruz® Blocking Reagent: sc-516214 (B).

## SELECT PRODUCT CITATIONS

- Chakrama, F.Z., et al. 2010. GABARAPL1 (GEC1) associates with autophagic vesicles. *Autophagy* 6: 495-505.
- Funauchi, Y., et al. 2015. Regulation of iron homeostasis by the p53-ISCU pathway. *Sci. Rep.* 5: 16497.
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- Smith, C.P., et al. 2019. Proximal tubule transferrin uptake is modulated by cellular iron and mediated by apical membrane megalin-cubilin complex and transferrin receptor 1. *J. Biol. Chem.* 294: 7025-7036.
- Mancinelli, R., et al. 2020. Different iron-handling in inflamed small and large cholangiocytes and in small and large-duct type intrahepatic cholangiocarcinoma. *Eur. J. Histochem.* 64: 3156.
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- Bentaleb, C., et al. 2022. The endocytic recycling compartment serves as a viral factory for hepatitis E virus. *Cell. Mol. Life Sci.* 79: 615.
- Schleinitz, A., et al. 2023. Consecutive functions of small GTPases guide HOPS-mediated tethering of late endosomes and lysosomes. *Cell Rep.* 42: 111969.

## RESEARCH USE

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

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