

# CD71 (K-20): sc-7088

## 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 (K-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping to the C-terminus 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.

Blocking peptide available for competition studies, sc-7088 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

CD71 (K-20) 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), 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).

CD71 (K-20) is also recommended for detection of CD71 in additional species, including equine, canine, bovine and porcine.

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: K-562 whole cell lysate: sc-2203, CCRF-CEM cell lysate: sc-2225 or Jurkat + PMA cell lysate: sc-24718.

## STORAGE

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

## SELECT PRODUCT CITATIONS

- Confalonieri, S., et al. 2000. Tyrosine phosphorylation of Eps15 is required for ligand-regulated, but not constitutive, endocytosis. *J. Cell Biol.* 150: 905-912.
- Matskova, L., et al. 2001. C-terminal domain of the Epstein-Barr virus LMP2A membrane protein contains a clustering signal. *J. Virol.* 75: 10941-10949.
- He, H., et al. 2003. Post-translational modifications of three members of the human MAP1LC3 family and detection of a novel type of modification for MAP1LC3B. *J. Biol. Chem.* 278: 29278-29287.
- Karaöz, E., et al. 2009. Characterization of mesenchymal stem cells from rat bone marrow: ultrastructural properties, differentiation potential and immunophenotypic markers. *Histochem. Cell Biol.* 132: 533-546.
- Karaöz, E. 2009. Pancreatic islet-derived stem cells may have a key role in type 1 diabetes pathogenesis. *Cell Tissue Biol. Res.* 2: 8-22.
- Karaöz, E., et al. 2010. Isolation and *in vitro* characterisation of dental pulp stem cells from natal teeth. *Histochem. Cell Biol.* 133: 95-112.
- Karaöz, E., et al. 2010. Protection of rat pancreatic islet function and viability by coculture with rat bone marrow-derived mesenchymal stem cells. *Cell Death Dis.* 1: e36.
- Karaöz, E., et al. 2010. Isolation and characterization of stem cells from pancreatic islet: pluripotency, differentiation potential and ultrastructural characteristics. *Cytotherapy* 12: 288-302.
- Karaöz, E., et al. 2010. Pancreatic islet derived stem cells can express co-stimulatory molecules of antigen-presenting cells. *Transplant. Proc.* 42: 3663-3670.
- Karaöz, E., et al. 2011. A comprehensive characterization study of human bone marrow mscs with an emphasis on molecular and ultrastructural properties. *J. Cell. Physiol.* 226: 1367-1382.
- Adas, G., et al. 2011. Mesenchymal stem cells improve the healing of ischemic colonic anastomoses (experimental study). *Langenbecks Arch. Surg.* 396: 115-126.
- Karaöz, E., et al. 2012. Reduction of lesion in injured rat spinal cord and partial functional recovery of motility after bone marrow derived mesenchymal stem cell transplantation. *Turk. Neurosurg.* 22: 207-217.

## RESEARCH USE

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


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Try **CD71 (3B8 2A1): sc-32272** or **CD71 (YTA 74.4): sc-59112**, our highly recommended monoclonal alternatives to CD71 (K-20). Also, for AC, HRP, FITC, PE, Alexa Fluor<sup>®</sup> 488 and Alexa Fluor<sup>®</sup> 647 conjugates, see **CD71 (3B8 2A1): sc-32272**.