

CD71 (DF1513): sc-7327

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.

SOURCE

CD71 (DF1513) is a mouse monoclonal antibody raised against KG1 acute myeloid leukemia cell line.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CD71 (DF1513) is available conjugated to either phycoerythrin (sc-7327 PE), fluorescein (sc-7327 FITC), Alexa Fluor® 488 (sc-7327 AF488) or Alexa Fluor® 647 (sc-7327 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM.

In addition, CD71 (DF1513) is available conjugated to Alexa Fluor® 405 (sc-7327 AF405, 200 µg/ml), for IF, IHC(P) and FCM.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

APPLICATIONS

CD71 (DF1513) is recommended for detection of CD71 of human origin by 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 10⁶ cells).

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

Molecular Weight of CD71: 85-95 kDa.

Molecular Weight of CD71 dimer: 190 kDa.

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

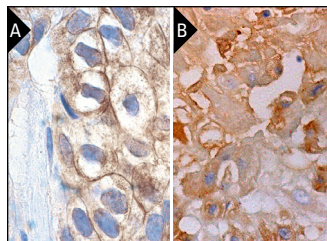
STORAGE

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

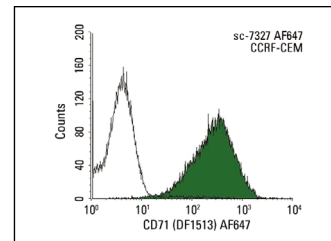
RESEARCH USE

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

DATA



CD71 (DF1513): sc-7327. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human breast carcinoma tissue showing membrane staining (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta tissue showing cytoplasmic and membrane staining of decidual cells (B).



CD71 (DF1513) Alexa Fluor® 647: sc-7327 AF647. FCM analysis of CCRF-CEM cells. Black line histogram represents the isotype control, normal mouse IgG₁ Alexa Fluor® 647: sc-24636.

SELECT PRODUCT CITATIONS

- Koppers-Lalic, D., et al. 2003. Bovine herpesvirus 1 interferes with TAP-dependent peptide transport and intracellular trafficking of MHC class I molecules in human cells. Arch. Virol. 148: 2023-2037.
- Kim, D.S., et al. 2007. Terrein, a fungal metabolite, inhibits the epidermal proliferation of skin equivalents. J. Dermatol. Sci. 46: 65-68.
- Luissint, A.C., et al. 2008. JAM-L-mediated leukocyte adhesion to endothelial cells is regulated in cis by $\alpha 4 \beta 1$ integrin activation. J. Cell Biol. 183: 1159-1173.
- Srouji, S., et al. 2009. The Schneiderian membrane contains osteoprogenitor cells: *in vivo* and *in vitro* study. Calcif. Tissue Int. 84: 138-145.
- Ben-David, D., et al. 2010. A tissue-like construct of human bone marrow MSCs composite scaffold support *in vivo* ectopic bone formation. J. Tissue Eng. Regen. Med. 4: 30-37.
- Bonilla, S., et al. 2012. Neonatal iron overload and tissue siderosis due to gestational alloimmune liver disease. J. Hepatol. 56: 1351-1355.
- Andrzejewska, Z., et al. 2015. Lysosomal targeting of cystinosis requires AP-3. Traffic 16: 712-726.
- Zhan, R., et al. 2016. Nitric oxide promotes epidermal stem cell migration via cGMP-Rho GTPase signalling. Sci. Rep. 6: 30687.
- Praest, P., et al. 2018. The influence of TAP1 and TAP2 gene polymorphisms on TAP function and its inhibition by viral immune evasion proteins. Mol. Immunol. 101: 55-64.
- Deen, D., et al. 2021. Identification of the transcription factor MAZ as a regulator of erythropoiesis. Blood Adv. 5: 3002-3015.

CONJUGATES

See **CD71 (3B8 2A1): sc-32272** for CD71 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.