

CD72 (H-96): sc-1707

BACKGROUND

CD5 has been identified as a transmembrane glycoprotein that is expressed on 70% of normal peripheral blood lymphocytes and on virtually all T lymphocytes in thymus and peripheral blood. Activation of T cells through the T cell receptor (TCR) results in tyrosine phosphorylation of CD5, and the absence of CD5 renders T cells hyper-responsive to TCR-mediated activation. CD5 associates with the TCR/CD3 ζ chain, and with the Src family kinase, Lck p56. The C-type lectin superfamily member CD72 is a cell surface negative regulator of B cell activation from the pro-B through the mature B cell stage. CD72 serves as a receptor for CD5. The ability of lymphocytes to respond to antigenic or mitogenic stimulation utilizes both positive and negative regulatory proteins that influence the threshold for responsiveness. The human CD72 gene maps to chromosome 9p13.3 and encodes a transmembrane glycoprotein that contains an immunoreceptor tyrosine-based inhibition motif (ITIM). Upon tyrosine phosphorylation, the CD72 ITIM recruits SH2-containing phosphatases such as SHP-1, resulting in downregulation of cell activation. CD72^{-/-} mice contain hyperproliferative B cells.

CHROMOSOMAL LOCATION

Genetic locus: CD72 (human) mapping to 9p13.3; Cd72 (mouse) mapping to 4 B1.

SOURCE

CD72 (H-96) is a rabbit polyclonal antibody raised against amino acids 1-96 of CD72 of mouse origin.

PRODUCT

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

APPLICATIONS

CD72 (H-96) is recommended for detection of CD72 of mouse, rat and 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), immunohistochemistry (including paraffin-embedded sections) (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 CD72 siRNA (h): sc-37250, CD72 siRNA (m): sc-35022, CD72 shRNA Plasmid (h): sc-37250-SH, CD72 shRNA Plasmid (m): sc-35022-SH, CD72 shRNA (h) Lentiviral Particles: sc-37250-V and CD72 shRNA (m) Lentiviral Particles: sc-35022-V.

Molecular Weight of CD72: 45 kDa.

Positive Controls: BJAB whole cell lysate: sc-2207, CD72 (m): 293T Lysate: sc-125116 or NIH/3T3 whole cell lysate: sc-2210.

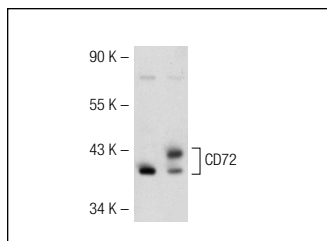
STORAGE

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

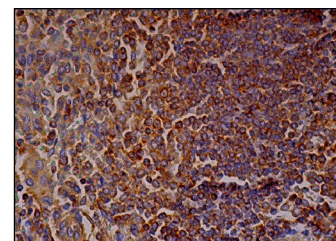
RESEARCH USE

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

DATA



CD72 (H-96): sc-1707. Western blot analysis of CD72 expression in non-transfected: sc-117752 (A) and mouse CD72 transfected: sc-125116 (B) 293T whole cell lysates.



CD72 (H-96): sc-1707. Immunoperoxidase staining of formalin fixed, paraffin-embedded human spleen tissue showing cytoplasmic and membrane staining of cells in white pulp and cells in red pulp.

SELECT PRODUCT CITATIONS

- Kumanogoh, A., et al. 2000. Identification of CD72 as a lymphocyte receptor for the class IV semaphorin CD100: a novel mechanism for regulating B cell signaling. *Immunity* 13: 621-631.
- Shi, W., et al. 2000. The class IV semaphorin CD100 plays nonredundant roles in the immune system: defective B and T cell activation in CD100-deficient mice. *Immunity* 13: 633-642.
- Ishida, I., et al. 2003. Involvement of CD100, a lymphocyte semaphorin, in the activation of the human immune system via CD72: implications for the regulation of immune and inflammatory responses. *Int. Immunol.* 15: 1027-1034.
- Hitomi, Y., et al. 2004. CD72 polymorphisms associated with alternative splicing modify susceptibility to human systemic lupus erythematosus through epistatic interaction with FCGR2B. *Hum. Mol. Genet.* 13: 2907-2917.
- Kumanogoh, A., et al. 2005. Requirement for CD100-CD72 interactions in fine-tuning of B cell antigen receptor signaling and homeostatic maintenance of the B cell compartment. *Int. Immunol.* 17: 1277-1282.
- Yamashita, Y., et al. 2006. A unique CD72 epitope suggests a potential interaction with Fc γ RII/CD32 on B lineage lymphocytes. *Hybridoma* 25: 107-114.
- Li, D.H., et al. 2008. Modulation of peripheral B cell tolerance by CD72 in a murine model. *Arthritis Rheum.* 58: 3192-3204.
- Kataoka, T.R., et al. 2010. CD72 negatively regulates KIT-mediated responses in human mast cells. *J. Immunol.* 184: 2468-2475.



Try **CD72 (G-5): sc-25265** or **CD72 (H-7): sc-7483**, our highly recommended monoclonal alternatives to CD72 (H-96).