SANTA CRUZ BIOTECHNOLOGY, INC.

CD72 (G-5): sc-25265

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 (G-5) is a mouse monoclonal antibody raised against amino acids 1-96 of CD72 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CD72 (G-5) is available conjugated to agarose (sc-25265 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-25265 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-25265 PE), fluorescein (sc-25265 FITC), Alexa Fluor® 488 (sc-25265 AF488), Alexa Fluor® 546 (sc-25265 AF546), Alexa Fluor® 594 (sc-25265 AF594) or Alexa Fluor® 647 (sc-25265 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-25265 AF680) or Alexa Fluor® 790 (sc-25265 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

CD72 (G-5) is recommended for detection of CD72 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1,000), 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).

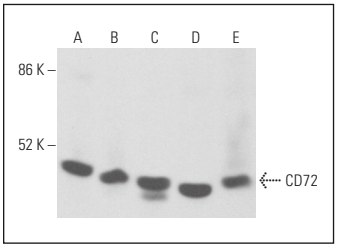
Suitable for use as control antibody for CD72 siRNA (h): sc-37250, CD72 siRNA (m): sc-35022, CD72 shRNA Plasmid (h): sc-37250-SH, CD72 shRNA Plasmid (m): sc-35022-SH, CD72 shRNA (h) Lentiviral Particles: sc-37250-V and CD72 shRNA (m) Lentiviral Particles: sc-35022-V.

Molecular Weight of CD72: 45 kDa.

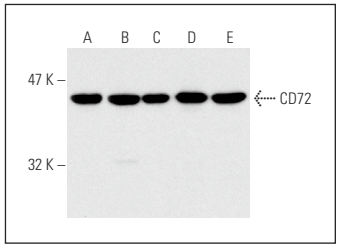
STORAGE

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

DATA



CD72 (G-5): sc-25265. Western blot analysis of CD72 expression in U-698-M (**A**), BJAB (**B**), Jurkat (**C**), Raji (**D**) and JM1 (**E**) whole cell lysates. Detection reagent used: m-IgGκ BP-HRP: sc-516102.



CD72 (G-5): sc-25265. Western blot analysis of CD72 expression in BJAB (**A**), Raji (**B**), JM1 (**C**), U-698-M (**D**) and Jurkat (**E**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Verma-Gaur, J., et al. 2012. Negative feedback regulation of antigen receptors through calmodulin inhibition of E2A. J. Immunol. 188: 6175-6183.
2. Chavez-Valdez, R., et al. 2012. Effect of hyperoxic exposure during early development on neurotrophin expression in the carotid body and nucleus tractus solitarii. J. Appl. Physiol. 112: 1762-1772.
3. Hauser, J., et al. 2013. Broad feedback inhibition of pre-B-cell receptor signaling components. Mol. Immunol. 54: 247-253.
4. Wang, H.M., et al. 2020. Insufficient CD100 shedding contributes to suppression of $CD8^+$ T cell activity in non-small cell lung cancer. Immunology 160: 209-219.
5. Lee, J., et al. 2021. Dermatan sulfate is a potential regulator of IgH via interactions with Pre-BCR, GTF2I, and BiP ER complex in Pre-B lymphoblasts. Front. Immunol. 12: 680212.
6. Eiza, N., et al. 2022. CD72-semaphorin3A axis: a new regulatory pathway in systemic lupus erythematosus. J. Autoimmun. 134: 102960.
7. Ding, H., et al. 2024. Integrative transcriptomic analysis reveals Cd72 as a novel pro-inflammatory factor in microglia following experimental ischemic stroke. Exp. Neurol. 382: 114974.

RESEARCH USE

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

PROTOCOLS

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