

CD7 (CBC.37): sc-59108



The Power to Question

BACKGROUND

CD7 (also designated T cell leukemia antigen) is a type I transmembrane glycoprotein that is expressed on pluripotential hemopoietic cells, most human thymocytes and some peripheral blood T cells. CD7 is a marker for pluripotential stem cell leukemias and T cell acute lymphocytic leukemia. A role for CD7 in the activation of T cells with γ/δ receptors has been suggested. CD8 T cells from patients infected with HIV-1 displayed profound down-modulation of CD7 expression as compared with healthy subjects. CD7 is among the pan-T-cell antigens down-regulated in acute infectious mononucleosis.

REFERENCES

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- Schanberg, L.E., et al. 1995. Characterization of human CD7 transgenic mice. *J. Immunol.* 155: 2407-2418.
- Leta, E., et al. 1995. Production and characterization of the extracellular domain of human CD7 antigen: further evidence that CD7 has a role in T cell signaling. *Cell. Immunol.* 165: 101-109.
- Ward, S.G., et al. 1995. Antibody ligation of CD7 leads to association with phosphoinositide 3-kinase and phosphatidylinositol 3,4,5-triphosphate formation in T lymphocytes. *Eur. J. Immunol.* 25: 502-507.
- Weisberger, J., et al. 2003. Down-regulation of pan-T-cell antigens, particularly CD7, in acute infectious mononucleosis. *Am. J. Clin. Pathol.* 120: 49-55.
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CHROMOSOMAL LOCATION

Genetic locus: CD7 (human) mapping to 17q25.3.

SOURCE

CD7 (CBC.37) is a mouse monoclonal antibody raised against CD7 of human origin.

PRODUCT

Each vial contains 200 μ g IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CD7 (CBC.37) is available conjugated to agarose (sc-59108 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-59108 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-59108 PE), fluorescein (sc-59108 FITC), Alexa Fluor[®] 488 (sc-59108 AF488), Alexa Fluor[®] 546 (sc-59108 AF546), Alexa Fluor[®] 594 (sc-59108 AF594) or Alexa Fluor[®] 647 (sc-59108 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-59108 AF680) or Alexa Fluor[®] 790 (sc-59108 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

CD7 (CBC.37) is recommended for detection of CD7 of 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 flow cytometry (1 μ g per 1 x 10⁶ cells).

Suitable for use as control antibody for CD7 siRNA (h): sc-35021, CD7 shRNA Plasmid (h): sc-35021-SH and CD7 shRNA (h) Lentiviral Particles: sc-35021-V.

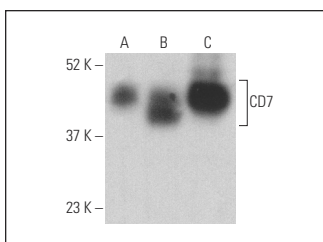
Molecular Weight of CD7: 40 kDa.

Positive Controls: CCRF-CEM cell lysate: sc-2225, Jurkat whole cell lysate: sc-2204 or SUP-T1 whole cell lysate: sc-364796.

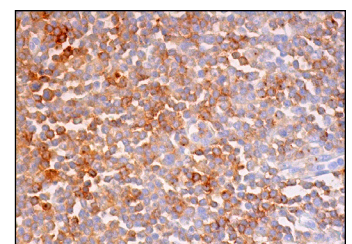
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker[™] Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgG κ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



CD7 (CBC.37) HRP: sc-59108 HRP. Direct western blot analysis of CD7 expression in SUP-T1 (A), Jurkat (B) and CCRF-CEM (C) whole cell lysates.



CD7 (CBC.37): sc-59108. Immunoperoxidase staining of formalin fixed, paraffin-embedded human lymph node tissue showing membrane and cytoplasmic staining of subset of cells in non-germinal center.

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.

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