

# CD10 (SN5c/L4-1A1): sc-80544

## BACKGROUND

CD10, also called the common acute lymphoblastic leukemia antigen (CALLA) and neutral endopeptidase (NEP), is a type II integral membrane glycoprotein. CD10 acts as a zinc metalloprotease that cleaves a variety of biologically active peptides including angiotensins I and II. It is expressed on early B and T lymphoid precursors, B blasts, some granulocytes, bone marrow stromal cells and certain epithelial cells including some tumor cell lines. CD10 is used as a marker of common acute lymphocytic leukemias and some lymphomas.

## REFERENCES

- Horejsi, V., et al. 1988. Monoclonal antibodies against human leucocyte antigens. II. Antibodies against CD45 (T200), CD3 (T3), CD43, CD10 (CALLA), transferrin receptor (T9), a novel broadly expressed 18 kDa antigen (MEM-43) and a novel antigen of restricted expression (MEM-74). *Folia Biol.* 34: 23-34.
- Knapp, W., et al., eds. 1989. *Leucocyte Typing IV*. New York: Oxford University Press.
- Chen, C.Y., et al. 1992. Murine common acute lymphoblastic leukemia antigen (CD10 neutral endopeptidase 24.11). Molecular characterization, chromosomal localization, and modeling of the active site. *J. Immunol.* 148: 2817-2825.
- Shipp, M.A., et al. 1993. Hematopoietic differentiation antigens that are membrane-associated enzymes: cutting is the key! *Blood* 82: 1052-1070.
- Lu, B., et al. 1995. Neutral endopeptidase modulation of septic shock. *J. Exp. Med.* 181: 2271-2275.
- Kalled, S.L., et al. 1995. The distribution of CD10 (NEP 24.11, CALLA) in human and mice is similar in non-lymphoid organs but differs within the hematopoietic system: absence on murine T and B lymphoid progenitors. *Eur. J. Immunol.* 25: 677-687.

## CHROMOSOMAL LOCATION

Genetic locus: MME (human) mapping to 3q25.2; Mme (mouse) mapping to 3 E1.

## SOURCE

CD10 (SN5c/L4-1A1) is a mouse monoclonal antibody immunized with a cell membrane antigen isolated from fresh leukemia cells of a patient with B-lineage leukemia.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## 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.

## APPLICATIONS

CD10 (SN5c/L4-1A1) is recommended for detection of CD10 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 flow cytometry (1 µg per 1 x 10<sup>6</sup> cells).

Suitable for use as control antibody for CD10 siRNA (h): sc-29959, CD10 siRNA (m): sc-37230, CD10 shRNA Plasmid (h): sc-29959-SH, CD10 shRNA Plasmid (m): sc-37230-SH, CD10 shRNA (h) Lentiviral Particles: sc-29959-V and CD10 shRNA (m) Lentiviral Particles: sc-37230-V.

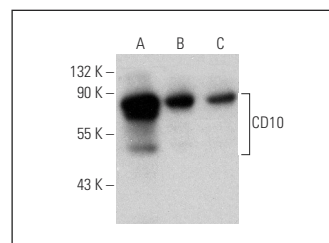
Molecular Weight of CD10: 100 kDa.

Positive Controls: ACHN whole cell lysate: sc-364365, Jurkat whole cell lysate: sc-2204 or CD10 (h): 293T Lysate: sc-111697.

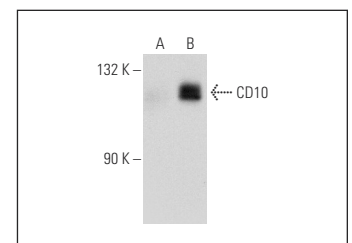
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA



CD10 (SN5c/L4-1A1): sc-80544. Western blot analysis of CD10 expression in Jurkat (A), ACHN (B) and C3H/10T1/2 (C) whole cell lysates.



CD10 (SN5c/L4-1A1): sc-80544. Western blot analysis of CD10 expression in non-transfected (A) and human CD10 transfected: sc-111697 (B) 293T whole cell lysates.

## SELECT PRODUCT CITATIONS

- Pinho, S., et al. 2013. PDGFRα and CD51 mark human nestin+ sphere-forming mesenchymal stem cells capable of hematopoietic progenitor cell expansion. *J. Exp. Med.* 210: 1351-1367.



See **CD10 (F-4): sc-46656** for CD10 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.