SANTA CRUZ BIOTECHNOLOGY, INC.

CD10 (97C5): sc-19993

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

1. 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.
2. Shipp, M.A., et al. 1993. Hematopoietic differentiation antigens that are membrane-associated enzymes: cutting is the key! Blood 82: 1052-1070.
3. Lu, B., et al. 1995. Neutral endopeptidase modulation of septic shock. J. Exp. Med. 181: 2271-2275.
4. 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.

SOURCE

CD10 (97C5) is a mouse monoclonal antibody raised against BV173 Ph1-positive human leukemia.

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.

CD10 (97C5) is available conjugated to either phycoerythrin (sc-19993 PE) or fluorescein (sc-19993 FITC), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM.

APPLICATIONS

CD10 (97C5) is recommended for detection of CD10 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 10^6 cells).

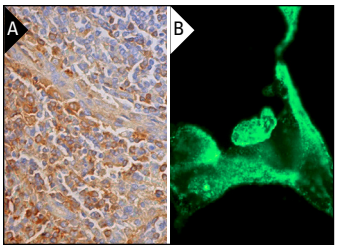
Suitable for use as control antibody for CD10 siRNA (h): sc-29959, CD10 shRNA Plasmid (h): sc-29959-SH and CD10 shRNA (h) Lentiviral Particles: sc-29959-V.

Molecular Weight of CD10: 100 kDa.

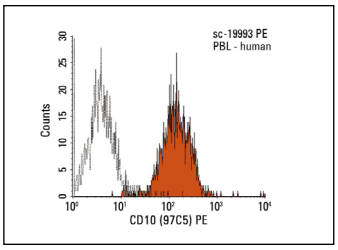
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) 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. 2) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



CD10 (97C5): sc-19993. 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 (**A**). Immunofluorescence staining of methanol-fixed LNCaP cells showing membrane staining (**B**).



CD10 (97C5) PE: sc-19993 PE. FCM analysis of human peripheral blood leukocytes. Black line histogram represents the isotype control, normal mouse IgG_1-PE: sc-2866.

SELECT PRODUCT CITATIONS

1. Guimaraes-Souza, N.K., et al. 2012. *In vitro* reconstitution of human kidney structures for renal cell therapy. Nephrol. Dial. Transplant. 27: 3082-3090.
2. Abdel-Aziz, A. and Amin, M.M. 2012. EGFR, CD10 and proliferation marker Ki67 expression in ameloblastoma: possible role in local recurrence. Diagn. Pathol. 7: 14.
3. Andisheh-Tadbir, A., et al. 2016. Prognostic value of matrix metalloproteinase-9 expression in oral squamous cell carcinoma and its association with angiogenesis. J. Clin. Exp. Dent. 8: e130-e135.

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.

PROTOCOLS

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

CONJUGATES

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.