

SCIENTIFIC BACKGROUND:

CD10, also known as common acute lymphoblastic leukemia antigen (CALLA), neprilysin, enkephalinase, gp100, neutral endopeptidase (NEP), and membrane metalloendopeptidase (MME), is a 100 kD type II transmembrane glycoprotein.^{1,2} CD10 functions as a zinc metallopeptidase that cleaves and inactivates several peptide hormones including enkaphalins, tachykinins, natriuretic and chemotactic peptidases.³ CD10 is an important surface marker expressed on most acute lymphoblastic leukemias and on normal lymphoid progenitors.⁴⁻⁷ CD10 is also expressed by cells of a variety of normal tissues, including renal epithelium, respiratory mucosa and basal cells of the human mammary epithelium.⁸⁻¹¹

SPECIFICITY:

The FR4D11 mouse monoclonal antibody recognizes human CD10.

CLONE:

 FR4D11

ISOTYPE:

 IgG₁

IMMUNOGEN:

A BALB/c mouse was immunized with Raji (Burkitt's lymphoma) cells. Splenocytes were fused with mouse myeloma X63Ag8.653 cells.

FORMAT:

100 µg in 100 µL (1 mg/mL) of phosphate buffered saline (PBS).

STABILITY AND STORAGE:

The antibody should be stored at 2-8°C. Do not freeze. Product is stable for at least 2 years.

APPLICATIONS AND DIRECTIONS FOR USE:

Refer to Material Safety Data Sheet for more information.

Centrifuge tube briefly before use to ensure recovery of entire contents.

The antibody is suitable for flow cytometry when used at 1 - 3 µg per million cells resuspended in 100 µL (e.g. 1 - 3 µL of antibody per 100 µL of cells). The antibody is also suitable for immunohistochemical staining of frozen tissue sections but not for paraffin-embedded tissue sections. Note: Optimal working dilutions should be determined for each specific application.

REFERENCES

1. Shipp MA, Richardson NE, Sayre PH, Brown NR, Masteller EL, Clayton LK, Ritz J, Reinherz EL: Molecular cloning of the common acute lymphoblastic leukemia antigen (CALLA) identifies a type II integral membrane protein. Proc Natl Acad Sci, USA 85: 4819-4823, 1988
2. Letarte M, Vera S, Tran R, Addis JB, Onizuka RJ, Quackenbush EJ, Jongeneel CV, McInnes RR: Common acute lymphocytic leukemia antigen is identical to neutral endopeptidase. J Exp Med 168: 1247-1253, 1988
3. Turner AJ, Isaac RE, Coates D: The neprilysin (NEP) family of zinc metalloendopeptidases: genomics and function. Bioessays 23: 261-269, 2001

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IT IS NOT TO BE ADMINISTERED TO HUMANS.**

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Product Information Sheet

ANTI-HUMAN CD10

Mouse Monoclonal Antibody
Clone FR4D11

Catalog #01431 100 mg

ANTI-BODIES


Version 1.1.0

4. Newman RA, Sutherland R, Greaves MF: The biochemical characterization of a cell surface antigen associated with acute lymphoblastic leukemia and lymphocyte precursors. *J Immunol* 126: 2024-2030, 2001
5. Pesando JM, Ritz J, Lazarus H, Costello SB, Sallan S, Schlossman SF: Leukemia-associated antigens in ALL. *Blood* 54: 1240-1248, 1979
6. Sallan SE, Ritz J, Pesando J, Gelber R, O'Brien C, Hitchcock S, Coral F, Schlossman SF: Cell surface antigens: prognostic implications in childhood acute lymphoblastic leukemia. *Blood* 55: 395-402, 1980
7. Rossi MI, Yokota T, Medina KL, Garrett KP, Comp PC, Schipul AH Jr, Kincade PW: B lymphopoiesis is active throughout human life, but there are developmental age-related changes. *Blood* 101: 576-584, 2003
8. Baraniuk JN, Ohkubo K, Kwon OJ, Mak J, Ali M, Davies R, Twort C, Kaliner M, Letarte M, Barnes PJ: Localization of neutral endopeptidase (NEP) mRNA in human bronchi. *Eur Respir J* 8: 1458-1464, 1995
9. Gusterson BA, Monaghan P, Mahendran R, Ellis J, O'Hare MJ: Identification of myoepithelial cells in human and rat breasts by anti-common acute lymphoblastic leukemia antigen antibody A12. *J Natl Cancer Inst* 77: 343-349, 1986
10. Rudland PS, Hughes CM: Immunocytochemical identification of cell types in human mammary gland: variations in cellular markers are dependent on glandular topography and differentiation. *J Histochem Cytochem* 37: 1087-1100, 1989
11. O'Hare MJ, Ormerod MG, Monaghan P, Lane EB, Gusterson BA: Characterization *in vitro* of luminal and myoepithelial cells isolated from the human mammary gland by cell sorting. *Differentiation* 46: 209-221, 1991

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