

CD10 (FR4D11): sc-7632

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.
- Shipp, M.A. and Look, A.T. 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.
- Schlossman, S.L., et al. 1995. *Leukocyte Typing V: White Cell Differentiation Antigens.* Oxford: Oxford University Press.
- Bene, M.C., et al. 1997. CD10 in acute leukemias. *Haematologica* 82: 205-210.

CHROMOSOMAL LOCATION

Genetic locus: MME (human) mapping to 3q25.2.

SOURCE

CD10 (FR4D11) is a mouse monoclonal antibody raised against CD10 in Raji cells of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CD10 (FR4D11) is available conjugated to either phycoerythrin (sc-7632 PE) or fluorescein (sc-7632 FITC), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM.

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 (FR4D11) is recommended for detection of CD10 of human origin by immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x 10⁶ cells).

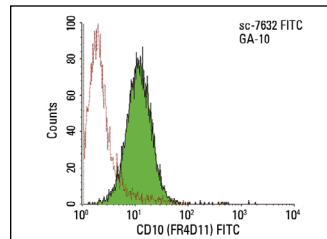
Suitable for use as control antibody for CD10 siRNA (h): sc-29959, CD10 shRNA Plasmid (h): sc-29959-SH and CD10 shRNA (h) Lentiviral Particles: sc-29959-V.

Molecular Weight of CD10: 100 kDa.

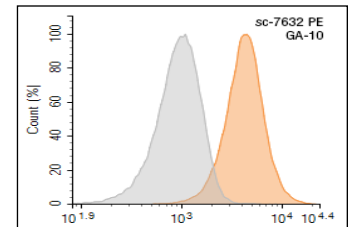
RECOMMENDED SUPPORT REAGENTS

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.

DATA



CD10 (FR4D11) FITC: sc-7632 FITC. FCM analysis of GA-10 cells. Black line histogram represents the isotype control, normal mouse IgG₁-FITC: sc-2855.



CD10 (FR4D11) PE: sc-7632 PE. FCM analysis of GA-10 cells. Gray histogram represents the isotype control, normal mouse IgG₁-PE: sc-2866.

SELECT PRODUCT CITATIONS

- Kyo, S. 2003. Successful immortalization of endometrial glandular cells with normal structural and functional characteristics. *Am. J. Pathol.* 163: 2259-2269.
- Sumitomo, M., et al. 2004. Synergy in tumor suppression by direct interaction of neutral endopeptidase with PTEN. *Cancer Cell* 5: 67-78.
- Iwase, A., et al. 2004. Direct binding of neutral endopeptidase 24.11 to ezrin/radixin/moesin (ERM) proteins competes with the interaction of CD44 with ERM proteins. *J. Biol. Chem.* 279: 11898-11905.
- Petrelli, A., et al. 2015. By promoting cell differentiation, miR-100 sensitizes basal-like breast cancer stem cells to hormonal therapy. *Oncotarget* 6: 2315-2330.
- Maida, Y., et al. 2016. Exosomal transfer of functional small RNAs mediates cancer-stroma communication in human endometrium. *Cancer Med.* 5: 304-314.



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.