SANTA CRUZ BIOTECHNOLOGY, INC.

CD10 siRNA (m): sc-37230

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. Schlossman, S.L., et al. 1995. Leukocyte typing V: white cell differentiation antigens. Oxford: Oxford University Press.
4. Lu, B., et al. 1995. Neutral endopeptidase modulation of septic shock. J. Exp. Med. 181: 2271-2275.
5. 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.
6. Barclay, A.N., et al. 1997. The Leukocyte Antigens Facts Book, 2nd Edition, CD10 Section, New York: Academic Press, 154.
7. Bene, M.C., et al. 1997. CD10 in acute leukemias. Haemotologica 82: 205-210.
8. LocusLink Report (LocusID: 4311). http://www.ncbi.nlm.nih.gov/LocusLink/

CHROMOSOMAL LOCATION

Genetic locus: Mme (mouse) mapping to 3 E1.

PRODUCT

CD10 siRNA (m) is a pool of 3 target-specific 19-25 nt siRNAs designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see CD10 shRNA Plasmid (m): sc-37230-SH and CD10 shRNA (m) Lentiviral Particles: sc-37230-V as alternate gene silencing products.

For independent verification of CD10 (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-37230A, sc-37230B and sc-37230C.

PROTOCOLS

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

STORAGE AND RESUSPENSION

Store lyophilized siRNA duplex at -20° C with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at -20° C, avoid contact with RNAses and repeated freeze thaw cycles.

Resuspend lyophilized siRNA duplex in 330 µl of the RNAse-free water provided. Resuspension of the siRNA duplex in 330 µl of RNAse-free water makes a 10 µM solution in a 10 µM Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

CD10 siRNA (m) is recommended for the inhibition of CD10 expression in mouse cells.

SUPPORT REAGENTS

For optimal siRNA transfection efficiency, Santa Cruz Biotechnology's siRNA Transfection Reagent: sc-29528 (0.3 ml), siRNA Transfection Medium: sc-36868 (20 ml) and siRNA Dilution Buffer: sc-29527 (1.5 ml) are recommended. Control siRNAs or Fluorescein Conjugated Control siRNAs are available as 10 µM in 66 µl. Each contain a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA. Fluorescein Conjugated Control siRNAs include: sc-36869, sc-44239, sc-44240 and sc-44241. Control siRNAs include: sc-37007, sc-44230, sc-44231, sc-44232, sc-44233, sc-44234, sc-44235, sc-44236, sc-44237 and sc-44238.

GENE EXPRESSION MONITORING

CD10 (F-4): sc-46656 is recommended as a control antibody for monitoring of CD10 gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

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) 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor CD10 gene expression knockdown using RT-PCR Primer: CD10 (m)-PR: sc-37230-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. Yun, Y.J., et al. 2022. Ginsenoside F1 protects the brain against Amyloid β-induced toxicity by regulating IDE and NEP. Life 12: 58.

RESEARCH USE

For research use only, not for use in diagnostic procedures.