SANTA CRUZ BIOTECHNOLOGY, INC.

CD96 siRNA (m): sc-142202

BACKGROUND

CD96 antigen, also designated T cell surface protein tactile (T cell activation, increased late expression) precursor, is a type I membrane protein and is a member of the immunoglobulin supergene family of proteins. The gene encoding for the CD96 protein maps to chromosome 3q13.13. During the late phases of the immune response, CD96 is involved in adhesive interactions of activated, both helper and cytotoxic, NK and T cells. It interacts with CD155. CD96, shows increased expression after NK and T cell activation. It can also be found actively engaging diseased cells and moving in inflamed areas after NK and T cells have moved through the endothelium. CD96 is involved in antigen presentation and/or lymphocyte activation. The protein, which may form a homodimer, is expressed on normal T cell lines and some transformed T cells.

REFERENCES

1. Wang, P.L., et al. 1992. Identification and molecular cloning of tactile. A novel human T cell activation antigen that is a member of the Ig gene superfamily. J. Immunol. 148: 2600-2608.
2. Gramatzki, M., et al. 1998. Antibodies TC-12 ("unique") and TH-111 (CD96) characterize T-cell acute lymphoblastic leukemia and a subgroup of acute myeloid leukemia. Exp. Hematol. 26: 1209-1214.
3. Burger, R., et al. 1999. Heterogeneity of T-acute lymphoblastic leukemia (T-ALL) cell lines: suggestion for classification by immunophenotype and T-cell receptor studies. Leuk. Res. 23: 19-27.
4. Fuchs, A., et al. 2004. Cutting edge: CD96 (tactile) promotes NK cell-target cell adhesion by interacting with the poliovirus receptor (CD155). J. Immunol. 172: 3994-3998.
5. Tomasec, P., et al. 2005. Downregulation of natural killer cell-activating ligand CD155 by human cytomegalovirus UL141. Nat. Immunol. 6: 181-188.
6. SWISS-PROT/TrEMBL (P40200). World Wide Web URL: http://www.expasy.ch/sprot/sprot-top.html

CHROMOSOMAL LOCATION

Genetic locus: Cd96 (mouse) mapping to 16 B5.

PRODUCT

CD96 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 CD96 shRNA Plasmid (m): sc-142202-SH and CD96 shRNA (m) Lentiviral Particles: sc-142202-V as alternate gene silencing products.

For independent verification of CD96 (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-142202A, sc-142202B and sc-142202C.

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

CD96 siRNA (m) is recommended for the inhibition of CD96 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor CD96 gene expression knockdown using RT-PCR Primer: CD96 (m)-PR: sc-142202-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

RESEARCH USE

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