SANTA CRUZ BIOTECHNOLOGY, INC.

SBEM siRNA (h): sc-95777

BACKGROUND

SBEM (small breast epithelial mucin), also known as MUCL1 (mucin-like 1), is a 90 amino acid secreted membrane protein that may play a role as marker for the diagnosis of metastatic breast cancer. SBEM contains three tandem copies of a neutral octapeptide core repeat, and its N- and C-terminal regions are charged and fairly polar. These features are similar to many sialomucins, although the SBEM protein lacks a transmembrane domain and is shorter than most other known epithelial mucins. Expressed in mammary, salivary glands, prostate and also in lung, SBEM is mainly expressed in cancer cell lines of breast origin. SBEM is also highly expressed in lymph node-positive compared with node-negative tumors and in all lymph node containing metastatic cells. The SBEM gene is conserved in chimpanzee, bovine, mouse, rat, chicken, zebrafish, *C. elegans* and *M. grisea,* and maps to human chromosome 12q13.2.

REFERENCES

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3. Hube, F., Mutawe, M., Leygue, E. and Myal, Y. 2004. Human small breast epithelial mucin: the promise of a new breast tumor biomarker. DNA Cell Biol. 23: 842-849.
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5. Hube, F., Chooniedass-Kothari, S., Hamedani, M.K., Miksicek, R.J., Leygue, E. and Myal, Y. 2006. Identification of an octamer-binding site controlling the activity of the small breast epithelial mucin gene promoter. Front. Biosci. 11: 2483-2495.
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PROTOCOLS

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

CHROMOSOMAL LOCATION

Genetic locus: MUCL1 (human) mapping to 12q13.2.

PRODUCT

SBEM siRNA (h) is a target-specific 19-25 nt siRNA 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 SBEM shRNA Plasmid (h): sc-95777-SH and SBEM shRNA (h) Lentiviral Particles: sc-95777-V as alternate gene silencing 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

SBEM siRNA (h) is recommended for the inhibition of SBEM expression in human 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 SBEM gene expression knockdown using RT-PCR Primer: SBEM (h)-PR: sc-95777-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. Abdulla, M., Traiki, T.B., Vaali-Mohammed, M.A., El-Wetidy, M.S., Alhassan, N., Al-Khayal, K., Zubaidi, A., Al-Obeed, O. and Ahmad, R. 2022. Targeting MUCL1 protein inhibits cell proliferation and EMT by deregulating β-catenin and increases irinotecan sensitivity in colorectal cancer. Int. J. Oncol. 60: 22.

RESEARCH USE

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