SANTA CRUZ BIOTECHNOLOGY, INC.

CEACAM19 siRNA (m): sc-142253

BACKGROUND

The carcinoembryonic antigen (CEA) family belongs to the immunoglobulin superfamily. Members of the CEA family have been shown to be expressed in a number of tumors of epithelial origin, such as lung adenocarcinoma, colorectal carcinoma, lung adenocarcinoma and endometrial adenocarcinoma. CEA family members also function in signal transduction or regulation of signal transduction. CEACAM19 (carcinoembryonic antigen-related cell adhesion molecule 19), also known as carcinoembryonic antigen-like 1, is a 300 amino acid protein that belongs to the CEA family. CEACAM19 is expressed ubiquitously, with highest expression in prostate, uterus, mammary gland, adrenal gland, small intestine, kidney, skeletal muscle and fetal brain. Also, CEACAM19 is expressed highly in breast and prostate cancer cell lines. Two isoforms of CEACAM19 exist as a result of alternative splicing events.

REFERENCES

1. Braatz, J.A., et al. 1984. A solid-phase, enzyme-linked immunosorbent assay for a human lung tumor-associated antigen. J. Natl. Cancer Inst. 72: 841-846.
2. Scorilas, A., et al. 2003. Molecular characterization of a new gene, CEAL1, encoding for a carcinoembryonic antigen-like protein with a highly conserved domain of eukaryotic translation initiation factors. Gene 310: 79-89.
3. Online Mendelian Inheritance in Man, OMIM™. 2004. Johns Hopkins University, Baltimore, MD. MIM Number: 606691. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
4. Hsu, W.H., et al. 2007. Preoperative serum carcinoembryonic antigen level is a prognostic factor in women with early non-small-cell lung cancer. Ann. Thorac. Surg. 83: 419-424.
5. Arrieta, O., et al. 2009. Brain metastasis development and poor survival associated with carcinoembryonic antigen (CEA) level in advanced non-small cell lung cancer: a prospective analysis. BMC Cancer 9: 119.

CHROMOSOMAL LOCATION

Genetic locus: Ceacam19 (mouse) mapping to 7 A3.

PRODUCT

CEACAM19 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 CEACAM19 shRNA Plasmid (m): sc-142253-SH and CEACAM19 shRNA (m) Lentiviral Particles: sc-142253-V as alternate gene silencing products.

For independent verification of CEACAM19 (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-142253A, sc-142253B and sc-142253C.

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

CEACAM19 siRNA (m) is recommended for the inhibition of CEACAM19 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 CEACAM19 gene expression knockdown using RT-PCR Primer: CEACAM19 (m)-PR: sc-142253-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.