SANTA CRUZ BIOTECHNOLOGY, INC.

CEACAM21 siRNA (h): sc-97917

BACKGROUND

Carcinoembryonic antigen (CEA) is one of the most commonly used tumor markers in serum immunoassay determinations of carcinoma. Members of the CEACAM (carcinoembryonic antigen-related cell adhesion molecule) family contain a single N domain, with structural homology to the immunoglobulin variable domains, followed by a variable number of immunoglobulin constant-like A and/or B domains. CEACAM21 (carcinoembryonic antigen-related cell adhesion molecule 21) is a 293 amino acid single-pass type I membrane protein that belongs to the CEACAM family and contains one Ig-like C2-type domain. CEACAM21 exists as three alternatively spliced isoforms that are encoded by a gene which maps to human chromosome 19.

REFERENCES

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2. Thompson, J.A., et al. 1991. Carcinoembryonic antigen gene family: molecular biology and clinical perspectives. J. Clin. Lab. Anal. 5: 344-366.
3. Rudert, F., et al. 1992. Characterization of murine carcinoembryonic antigen gene family members. Mamm. Genome 3: 262-273.
4. Skubitz, K.M., et al. 2001. Synthetic peptides from the N-domains of CEACAMs activate neutrophils. J. Pept. Res. 58: 515-526.
5. Thorp, E.B., et al. 2004. Requirements for CEACAMs and cholesterol during murine coronavirus cell entry. J. Virol. 78: 2682-2692.
6. Kuespert, K., et al. 2006. CEACAMs: their role in physiology and pathophysiology. Curr. Opin. Cell Biol. 18: 565-571.
7. Callaghan, M.J., et al. 2008. Haplotypic diversity in human CEACAM genes: effects on susceptibility to meningococcal disease. Genes Immun. 9: 30-37.

CHROMOSOMAL LOCATION

Genetic locus: CEACAM21 (human) mapping to 19q13.2.

PRODUCT

CEACAM21 siRNA (h) is a pool of 2 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 CEACAM21 shRNA Plasmid (h): sc-97917-SH and CEACAM21 shRNA (h) Lentiviral Particles: sc-97917-V as alternate gene silencing products.

For independent verification of CEACAM21 (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-97917A and sc-97917B.

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

CEACAM21 siRNA (h) is recommended for the inhibition of CEACAM21 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 CEACAM21 gene expression knockdown using RT-PCR Primer: CEACAM21 (h)-PR: sc-97917-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.