SANTA CRUZ BIOTECHNOLOGY, INC.

CEACAM5 siRNA (m): sc-142256

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. CEACAM5 (carcinoembryonic antigen-related cell adhesion molecule 5), also known as or CD66e, Psg30, meconium antigen 100 or CEA, is a cell surface glycoprotein belonging to the CEA family and immunoglobulin superfamily. Localizing to the cell membrane, CEACAM5 plays a role in intracellular signaling and cell adhesion. The gene encoding CEACAM5 maps to murine chromosome 7 and human chromosome 19.

REFERENCES

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2. Brandriff, B.F., et al. 1992. Order and genomic distances among members of the carcinoembryonic antigen (CEA) gene family determined by fluorescence *in situ* hybridization. Genomics 12: 773-779.
3. Gangopadhyay, A. and Thomas, P. 1996. Processing of carcinoembryonic antigen by Kupffer cells: recognition of a penta-peptide sequence. Arch. Biochem. Biophys. 334: 151-157.
4. Beauchemin, N., et al. 1999. Redefined nomenclature for members of the carcinoembryonic antigen family. Exp. Cell Res. 252: 243-249.
5. McLellan, A.S., et al. 2005. Structure and evolution of the mouse pregnancy-specific glycoprotein (Psg) gene locus. BMC Genomics 6: 4.
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CHROMOSOMAL LOCATION

Genetic locus: Ceacam5 (mouse) mapping to 7 A2.

PRODUCT

CEACAM5 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 CEACAM5 shRNA Plasmid (m): sc-142256-SH and CEACAM5 shRNA (m) Lentiviral Particles: sc-142256-V as alternate gene silencing products.

For independent verification of CEACAM5 (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-142256A, sc-142256B and sc-142256C.

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

CEACAM5 siRNA (m) is recommended for the inhibition of CEACAM5 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

CEACAM5 (CI-P83-1): sc-23928 is recommended as a control antibody for monitoring of CEACAM5 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 CEACAM5 gene expression knockdown using RT-PCR Primer: CEACAM5 (m)-PR: sc-142256-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.