SANTA CRUZ BIOTECHNOLOGY, INC.

CC10 siRNA (h): sc-29954

BACKGROUND

Clara cell 10 (CC10) protein, a homologue of rabbit uteroglobin, is a phospholipase A2 inhibitor. CC10 is regulated by AP-1, octamer, and hepatocyte nuclear factor-3 (HNF-3) family transcription factors. CC10 expression changes in relation to the ovarian menstrual cycle, and expression in human endometrium may be stimulated by progesterone, suggesting that CC10 may regulate eicosanoid levels in the human uterus. CC10 is expressed in nonciliated airway epithelial cells in the lung and in urogenital secretions. CC10 is involved in modulating inflammation in airway passages and may play a role in asthma. Overexpression of CC10 in the non-small cell lung cancer cell line A549 was shown to result in the near absence of MMP-2 and MMP-9 matrix metalloproteinases and a reduction in invasiveness, indicating that loss of CC10 may contribute to carcinogenesis.

REFERENCES

1. Hagen, G., et al. 1990. Tissue-specific expression, hormonal regulation and 5'-flanking gene region of the rat Clara cell 10 kDa protein: comparison to rabbit uteroglobin. Nucleic Acids Res. 18: 2939-2946.
2. Singh, G., et al. 1990. Clara cell 10 kDa protein (CC10): comparison of structure and function to uteroglobin. Biochim. Biophys. Acta 1039: 348-355.
3. Bernard, A., et al. 1992. Human urinary protein 1: evidence for identity with the Clara cell protein and occurrence in respiratory tract and urogenital secretions. Clin. Chim. Acta 207: 239-249.
4. Sawaya, P.L., et al. 1993. The lung-specific CC10 gene is regulated by transcription factors from the AP-1, octamer, and hepatocyte nuclear factor 3 families. Mol. Cell. Biol. 13: 3860-3871.
5. Peri, A., et al. 1994. Expression of Clara cell 10-kD gene in the human endometrium and its relationship to ovarian menstrual cycle. DNA Cell Biol. 13: 495-503.
6. Hay, J.G., et al. 1995. Human CC10 gene expression in airway epithelium and subchromosomal locus suggest linkage to airway disease. Am. J. Physiol. 268: L565-L575.

CHROMOSOMAL LOCATION

Genetic locus: SCGB1A1 (human) mapping to 11q12.3.

PRODUCT

CC10 siRNA (h) 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 CC10 shRNA Plasmid (h): sc-29954-SH and CC10 shRNA (h) Lentiviral Particles: sc-29954-V as alternate gene silencing products.

For independent verification of CC10 (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-29954A, sc-29954B and sc-29954C.

RESEARCH USE

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

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

CC10 shRNA Plasmid (h) is recommended for the inhibition of CC10 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.

GENE EXPRESSION MONITORING

CCC10 (E-11): sc-365992 is recommended as a control antibody for monitoring of CC10 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.

PROTOCOLS

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