SANTA CRUZ BIOTECHNOLOGY, INC.

CTS9 siRNA (h): sc-62204

BACKGROUND

CTS9, also known as DEC1 (deleted in esophageal cancer 1), is a 70 amino acid protein that is encoded by a candidate tumor suppressor gene (TSG) located on chromosome 9. Found in a region commonly deleted in esophageal squamous cell carcinoma (ESCC), CTS9 is able to suppress cancer cell growth *in vitro*. CTS9 is widely expressed with highest expression in the testis and prostate. Its reduced or absent expression in ESCC suggests a possible role in normal cell growth, development or signaling. CTS9 has a high loss of heterozygosity (LOH) frequency that is common in squamous cell carcinomas of the bladder, head, neck and esophagus.

REFERENCES

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2. Nishiwaki, T., et al. 2000. Isolation and mutational analysis of a novel human cDNA, DEC1 (deleted in esophageal cancer 1), derived from the tumor suppressor locus in 9q32. Genes Chromosomes Cancer 27: 169-176.
3. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 604767. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
4. Yang, L., et al. 2005. Tumor suppressive role of a 2.4 Mb 9q33-q34 critical region and DEC1 in esophageal squamous cell carcinoma. Oncogene 24: 697-705.
5. Preusser, M., et al. 2005. DEC1 expression in 1p-aberrant oligodendroglial neoplasms. Histol. Histopathol. 20: 1173-1177.
6. Li, Y., et al. 2006. The expression of antiapoptotic protein survivin is transcriptionally upregulated by DEC1 primarily through multiple sp1 binding sites in the proximal promoter. Oncogene 25: 3296-3306.
7. Leung, A.C., et al. 2007. Frequent decreased expression of candidate tumor suppressor gene, DEC1, and its anchorage-independent growth properties and impact on global gene expression in esophageal carcinoma. Int. J. Cancer 122: 587-594.

CHROMOSOMAL LOCATION

Genetic locus: DEC1 (human) mapping to 9q33.1.

PRODUCT

CTS9 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 CTS9 shRNA Plasmid (h): sc-62204-SH and CTS9 shRNA (h) Lentiviral Particles: sc-62204-V as alternate gene silencing products.

For independent verification of CTS9 (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-62204A, sc-62204B and sc-62204C.

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

CTS9 siRNA (h) is recommended for the inhibition of CTS9 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 CTS9 gene expression knockdown using RT-PCR Primer: CTS9 (h)-PR: sc-62204-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.

PROTOCOLS

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