SANTA CRUZ BIOTECHNOLOGY, INC.

COS5 siRNA (m): sc-142522

BACKGROUND

COS5, also known as ZNF69 (zinc finger protein 69), is a 566 amino acid nuclear protein that is suggested to play a role in transcriptional regulation. A member of the Krüppel C_2H_2-type zinc-finger protein family, COS5 contains one KRAB domain, 14 C_2H_2-type zinc fingers, and undergoes alternative splicing to produce 2 isoforms. The gene encoding COS5 maps to human chromosome 19, which consists of approximately 63 million bases and comprises over 2% of human genomic DNA. Chromosome 19 is recognized for having the greatest gene density of the human chromosomes. It is the genetic home for a number of immunoglobulin superfamily members, including the killer cell and leukocyte Ig-like receptors, a number of ICAMs, the CEACAM and PSG families, and Fcα receptors. Peutz-Jeghers syndrome, spinocerebellar ataxia type 6, the stroke disorder CADASIL, hypercholesterolemia and Insulin-dependent diabetes have been linked to chromo-some 19.

REFERENCES

1. Zimmermann, W., Weber, B., Ortlieb, B., Rudert, F., Schempp, W., Fiebig, H.H., Shively, J.E., von Kleist. S. and Thompson, J.A. 1988. Chromosomal localization of the carcinoembryonic antigen gene family and differential expression in various tumors. Cancer Res. 48: 2550-2554.
2. Aubry, M., Marineau, C., Zhang, F.R., Zahed, L., Figlewicz, D., Delattre, O., Thomas, G., de Jong, P.J., Julien, J.P. and Rouleau, G.A. 1992. Cloning of six new genes with zinc finger motifs mapping to short and long arms of human acrocentric chromosome 22 (p and q11.2). Genomics 13: 641-648.
3. LaPoint, S.F., Patel, U. and Rubio, A. 2000. Cerebral autosomal dominant arteriopathy with subcortical infarcts and leukoencephalopathy (CADASIL). Adv. Anat. Pathol. 7: 307-321.
4. Trettel, F., Mantuano, E., Calabresi, V., Veneziano, L., Olsen, A.S., Georgescu, A., Gordon, L., Sabbadini, G., Frontali, M. and Jodice, C. 2000. A fine physical map of the CACNA1A gene region on 19p13.1-p13.2 chromosome. Gene 241: 45-50.
5. Buchet-Poyau, K., Mehenni, H., Radhakrishna, U. and Antonarakis, S.E. 2002. Search for the second Peutz-Jeghers syndrome locus: exclusion of the STK13, PRKCG, KLK10, and PSCD2 genes on chromosome 19 and the STK11IP gene on chromosome 2. Cytogenet. Genome Res. 97: 171-178.
6. Moodie, S.J., Norman, P.J., King, A.L., Fraser, J.S., Curtis, D., Ellis, H.J., Vaughan, R.W. and Ciclitira, P.J. 2002. Analysis of candidate genes on chromosome 19 in coeliac disease: an association study of the KIR and LILR gene clusters. Eur. J. Immunogenet. 29: 287-291.
7. Parham, P. 2005. Immunogenetics of killer cell immunoglobulin-like receptors. Mol. Immunol. 42: 459-462.
8. Vikelis, M., Papatriantafyllou, J. and Karageorgiou, C.E. 2007. A novel CADASIL-causing mutation in a stroke patient. Swiss Med. Wkly. 137: 323-325.
9. Online Mendelian Inheritance in Man, OMIM™. 2010. Johns Hopkins University, Baltimore, MD. MIM Number: 194543. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/

CHROMOSOMAL LOCATION

Genetic locus: Zfp69 (mouse) mapping to 4 D2.2.

PRODUCT

COS5 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 COS5 shRNA Plasmid (m): sc-142522-SH and COS5 shRNA (m) Lentiviral Particles: sc-142522-V as alternate gene silencing products.

For independent verification of COS5 (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-142522A, sc-142522B and sc-142522C.

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

COS5 siRNA (m) is recommended for the inhibition of COS5 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 COS5 gene expression knockdown using RT-PCR Primer: COS5 (m)-PR: sc-142522-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.