

KANK3 siRNA (h): sc-97590

BACKGROUND

KANK3 (KN motif and ankyrin repeat domains 3), also known as ANKRD47, is a 840 amino acid protein containing five ANK repeats. Ankyrins are membrane adaptor molecules that play important roles in coupling integral membrane proteins to the spectrin-based cytoskeleton network. KANK3 is highly expressed in breast, liver, lung, skeletal muscle and kidney tissues and may play a role in the control of cytoskeleton formation by regulating actin polymerization. The gene encoding KANK3 is located on chromosome 19. Chromosome 19 makes up over 2% of the human genome and contains approximately 63 million bases, which encode over 1,400 genes. Recognized for having the greatest gene density of all human chromosomes, chromosome 19 is linked to Peutz-Jeghers syndrome, spinocerebellar ataxia type 6, the stroke disorder CADASIL, hypercholesterolemia and Insulin-dependent diabetes.

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. 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.
3. 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.
4. 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.
5. Grimwood, J., Gordon, L.A., Olsen, A., Terry, A., Schmutz, J., Lamerdin, J., Hellsten, U., Goodstein, D., Couronne, O., Tran-Gyamfi, M. 2004. The DNA sequence and biology of human chromosome 19. *Nature* 428: 529-535.
6. Brocke-Heidrich, K., Ge, B., Cvijic, H., Pfeifer, G., Löffler, D., Henze, C., McKeithan, T.W. and Horn, F. 2006. Bcl3 is induced by IL-6 via Stat3 binding to intronic enhancer HS4 and represses its own transcription. *Oncogene* 25: 7297-7304.
7. Vikelis, M., Papatriantafyllou, J. and Karageorgiou, C.E. 2007. A novel CADASIL-causing mutation in a stroke patient. *Swiss Med. Wkly.* 137: 323-325.
8. Zhu, Y., Kakinuma, N., Wang, Y. and Kiyama, R. 2008. Kank proteins: a new family of ankyrin-repeat domain-containing proteins. *Biochim. Biophys. Acta* 1780: 128-133.
9. Kakinuma, N., Zhu, Y., Wang, Y., Roy, B.C. and Kiyama, R. 2009. Kank proteins: structure, functions and diseases. *Cell. Mol. Life Sci.* 66: 2651-2659.

CHROMOSOMAL LOCATION

Genetic locus: KANK3 (human) mapping to 19p13.2.

PRODUCT

KANK3 siRNA (h) is a target-specific 19-25 nt siRNA designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see KANK3 shRNA Plasmid (h): sc-97590-SH and KANK3 shRNA (h) Lentiviral Particles: sc-97590-V as alternate gene silencing 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 μ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330 μ l of RNase-free water makes a 10 μ M solution in a 10 μ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

KANK3 siRNA (h) is recommended for the inhibition of KANK3 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 μ M in 66 μ l. 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.

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.