SANTA CRUZ BIOTECHNOLOGY, INC.

KCTD3 siRNA (m): sc-146394

BACKGROUND

KCTD3 (BTB/POZ domain-containing protein KCTD3), also known as NY-REN-45, is an 815 amino acid protein belonging to the KCTD3 family. Containing a BTB (POZ) domain and five WD repeats, KCTD3 is broadly expressed in normal tissue. KCTD3 reacts with a small percentage of cancer patient's sera, while no reactivity occurs with normal sera, and renal cancer patients have a higher probability of expressing antibodies against KCTD3. Existing as three alternatively spliced isoforms, the gene encoding KCTD3 maps to human chromosome 1q41 and mouse chromosome 1 H6. Human chromosome 1 spans 260 million base pairs, contains over 3,000 genes, comprises nearly 8% of the human genome and houses a large number of disease-associated genes, including those that are involved in familial adenomatous polyposis, Stickler syndrome, Parkinson's disease, Gaucher disease, schizophrenia and Usher syndrome.

REFERENCES

1. Eudy, J.D., Yao, S., Weston, M.D., Ma-Edmonds, M., Talmadge, C.B., Cheng, J.J., Kimberling, W.J. and Sumegi, J. 1998. Isolation of a gene encoding a novel member of the nuclear receptor superfamily from the critical region of Usher syndrome type IIa at 1q41. Genomics 50: 382-384.
2. Scanlan, M.J., Gordan, J.D., Williamson, B., Stockert, E., Bander, N.H., Jongeneel, V., Gure, A.O., Jager, D., Jager, E., Knuth, A., Chen, Y.T. and Old, L.J. 1999. Antigens recognized by autologous antibody in patients with renal-cell carcinoma. Int. J. Cancer 83: 456-464.
3. Bowling, E.L., Brown, M.D. and Trundle, T.V. 2000. The Stickler syndrome: case reports and literature review. Optometry 71: 177-182.
4. Tayebi, N., Callahan, M., Madike, V., Stubblefield, B.K., Orvisky, E., Krasnewich, D., Fillano, J.J. and Sidransky, E. 2001. Gaucher disease and parkinsonism: a phenotypic and genotypic characterization. Mol. Genet. Metab. 73: 313-321.
5. Oliveira, S.A., Li, Y.J., Noureddine, M.A., Zuchner, S., Qin, X., Pericak-Vance, M.A. and Vance, J.M. 2005. Identification of risk and age-at-onset genes on chromosome 1p in Parkinson disease. Am. J. Hum. Genet. 77: 252-264.
6. Yokoi, T., Koide, R., Matsuoka, K., Nakagawa, A. and Azuma, N. 2009. Analysis of the vitreous membrane in a case of type 1 Stickler syndrome. Graefes Arch. Clin. Exp. Ophthalmol. 247: 715-718.
7. Poot, M., Beyer, V., Schwaab, I., Damatova, N., Van't Slot, R., Prothero, J., Holder, S.E. and Haaf, T. 2010. Disruption of CNTNAP2 and additional structural genome changes in a boy with speech delay and autism spectrum disorder. Neurogenetics 11: 81-89.

CHROMOSOMAL LOCATION

Genetic locus: Kctd3 (mouse) mapping to 1 H6.

PROTOCOLS

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

PRODUCT

KCTD3 siRNA (m) 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see KCTD3 shRNA Plasmid (m): sc-146394-SH and KCTD3 shRNA (m) Lentiviral Particles: sc-146394-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 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

KCTD3 siRNA (m) is recommended for the inhibition of KCTD3 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 KCTD3 gene expression knockdown using RT-PCR Primer: KCTD3 (m)-PR: sc-146394-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.