SANTA CRUZ BIOTECHNOLOGY, INC.

TPRG1 siRNA (h): sc-78383

BACKGROUND

TPRG1 (tumor protein p63-regulated gene 1 protein), also known as FAM79B, is a 275 amino acid protein that belongs to the TPRG1 family. The gene that encodes TPRG1 consists of around 378,000 bases and maps to human chromosome 3q28. As one of the largest human chromosomes, chromosome 3 has the lowest rate of segmental duplication in the genome. It also contains a chemokine receptor gene group as well as a number of loci involved in multiple human cancers. 8.8 genes per Mb is the average gene density for chromosome 3, making it one of the more gene-poor chromosomes. Although the average gene density is low, the genes that make up chromosome 3 are larger than average and make up about 49% of the chromosome. A 13.6-cM region on 3p21.31-21.2, where a tumor suppressor gene cluster is located, is believed to be a novel locus for nasopharyngeal carcinoma.

REFERENCES

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3. Maho, A., et al. 1999. Mapping of the CCXCR1, CX3CR1, CCBP2 and CCR9 genes to the CCR cluster within the 3p21.3 region of the human genome. Cytogenet. Cell Genet. 87: 265-268.
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6. Tsend-Ayush, E., et al. 2004. Plasticity of human chromosome 3 during primate evolution. Genomics 83: 193-202.
7. Pfeifer, G.P., et al. 2005. Methylation of the tumor suppressor gene RASSF1A in human tumors. Biochemistry 70: 576-583.
8. Yue, Y., et al. 2005. Comparative cytogenetics of human chromosome 3q21.3 reveals a hot spot for ectopic recombination in hominoid evolution. Genomics 85: 36-47.

CHROMOSOMAL LOCATION

Genetic locus: TPRG1 (human) mapping to 3q28.

PRODUCT

TPRG1 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 TPRG1 shRNA Plasmid (h): sc-78383-SH and TPRG1 shRNA (h) Lentiviral Particles: sc-78383-V as alternate gene silencing products.

For independent verification of TPRG1 (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-78383A, sc-78383B and sc-78383C.

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

TPRG1 siRNA (h) is recommended for the inhibition of TPRG1 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 TPRG1 gene expression knockdown using RT-PCR Primer: TPRG1 (h)-PR: sc-78383-PR (20 µl, 408 bp). 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.