SANTA CRUZ BIOTECHNOLOGY, INC.

RAI16 siRNA (h): sc-76340

BACKGROUND

RAI16 (FAM160B2), also known as family with sequence similarity 160, member B2, FLJ11125, FLJ21801, MGC138352 or retinoic acid induced 16, is a 743 amino acid protein belonging to the UPF0518 family. Encoded by a gene that maps to human chromosome 8p21.3, RAI16 shares homology with mouse and rat orthologue. RAI16 may play a role in early lens development in mammals and in upregulation of genes in $CD34^+$ cells in coronary artery disease patients. Consisting of nearly 146 million base pairs, chromosome 8 encodes over 800 genes and is associated with a variety of diseases and malignancies. Schizophrenia, bipolar disorder, trisomy 8, Pfeiffer syndrome, congenital hypothyroidism, Waardenburg syndrome and some leukemias and lymphomas are thought to occur as a result of defects in specific genes that map to chromosome 8.

REFERENCES

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2. Naylor, T.L., et al. 2005. High resolution genomic analysis of sporadic breast cancer using array-based comparative genomic hybridization. Breast Cancer Res. 7: R1186-R1198.
3. Loor, J.J., et al. 2005. Temporal gene expression profiling of liver from periparturient dairy cows reveals complex adaptive mechanisms in hepatic function. Physiol. Genomics 23: 217-226.
4. Nusbaum, C., et al. 2006. DNA sequence and analysis of human chromosome 8. Nature 439: 331-335.
5. Graw, J., et al. 2008. Role of gap junction proteins in primary fiber cell elongation. Acta Ophthalmologica 86: 0.
6. Luo, X.Z., et al. 2008. Preparation and preliminary application of a rabbit anti-human polyclonal antibody against NH_2-terminal peptides of RAI16. Xi Bao Yu Fen Zi Mian Yi Xue Za Zhi 24: 898-901.

CHROMOSOMAL LOCATION

Genetic locus: FAM160B2 (human) mapping to 8p21.3.

PRODUCT

RAI16 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 RAI16 shRNA Plasmid (h): sc-76340-SH and RAI16 shRNA (h) Lentiviral Particles: sc-76340-V as alternate gene silencing products.

For independent verification of RAI16 (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-76340A, sc-76340B and sc-76340C.

PROTOCOLS

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

RAI16 siRNA (h) is recommended for the inhibition of RAI16 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 RAI16 gene expression knockdown using RT-PCR Primer: RAI16 (h)-PR: sc-76340-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.