SANTA CRUZ BIOTECHNOLOGY, INC.

TAFA5 siRNA (h): sc-76629

BACKGROUND

A group of small secreted proteins known as the TAFA family consists of five highly homologous genes: TAFA1, TAFA2, TAFA3, TAFA4 and TAFA5. Members of the TAFA family contain conserved cysteine residues at fixed positions and are highly expressed in brain. The TAFA family may be distantly related to a member of the CC-chemokine family known as MIP-1α, and have been postulated to regulate nervous and immune cells of the brain as neurokines or chemokines. TAFA5 (chemokine-like protein TAFA-5), also known as FAM19A5 (family with sequence similarity 19 (chemokine (C-C motif)-like), member A5), is a 132 amino acid protein that belongs to the FAM19/TAFA family. A single-pass membrane protein, TAFA5 consists of three alternatively spliced variants that are encoded by a gene located on human chromosome 22. TAFA5 isoform 2 is a brain-specific secreted protein.

REFERENCES

1. Andersson, B., et al. 1996. A "double adaptor" method for improved shotgun library construction. Anal. Biochem. 236: 107-113.
2. Bonaldo, M.F., et al. 1996. Normalization and subtraction: two approaches to facilitate gene discovery. Genome Res. 6: 791-806.
3. Dunham, I., et al. 1999. The DNA sequence of human chromosome 22. Nature 402: 489-495.
4. Clark, H.F., et al. 2003. The secreted protein discovery initiative (SPDI), a large-scale effort to identify novel human secreted and transmembrane proteins: a bioinformatics assessment. Genome Res. 13: 2265-2270.
5. Tom Tang, Y., et al. 2004. TAFA: a novel secreted family with conserved cysteine residues and restricted expression in the brain. Genomics 83: 727-734.
6. Mick, E., et al. 2008. Genome-wide association study of response to methylphenidate in 187 children with attention-deficit/hyperactivity disorder. Am. J. Med. Genet. B Neuropsychiatr. Genet. 147B: 1412-1418.

CHROMOSOMAL LOCATION

Genetic locus: FAM19A5 (human) mapping to 22q13.32.

PRODUCT

TAFA5 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 TAFA5 shRNA Plasmid (h): sc-76629-SH and TAFA5 shRNA (h) Lentiviral Particles: sc-76629-V as alternate gene silencing products.

For independent verification of TAFA5 (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-76629A, sc-76629B and sc-76629C.

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

TAFA5 siRNA (h) is recommended for the inhibition of TAFA5 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 TAFA5 gene expression knockdown using RT-PCR Primer: TAFA5 (h)-PR: sc-76629-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.