SANTA CRUZ BIOTECHNOLOGY, INC.

TAFA4 siRNA (m): sc-154059

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. TAFA4 [family with sequence similarity 19 (chemokine (C-C motif)-like), member A4], also known as chemokine-like protein TAFA-4, protein FAM19A4, TAFA-4, FLJ25161 or FAM19A4, is a 140 amino acid protein belonging to the FAM19/TAFA family. TAFA4 is a secreted protein that localizes to brain. The gene encoding TAFA4 maps to human chromosome 3, which houses over 1,100 genes, including a chemokine receptor (CKR) gene cluster and a variety of human cancer-related gene loci.

REFERENCES

1. De Jonghe, P., Timmerman, V., FitzPatrick, D., Spoelders, P., Martin, J.J. and Van Broeckhoven, C. 1997. Mutilating neuropathic ulcerations in a chromosome 3q13-q22 linked Charcot-Marie-Tooth disease type 2B family. J. Neurol. Neurosurg. Psychiatr. 62: 570-573.
2. Braga, E.A., Kashuba, V.I., Maliukova, A.V., Loginov, V.I., Senchenko, V.N., Bazov, I.V., Kiselev, L.L. and Zabarovsii, E.R. 2003. New tumor suppressor genes in hot spots of human chromosome 3: new methods of identification. Mol. Biol. 37: 194-211.
3. Tsend-Ayush, E., Grützner, F., Yue, Y., Grossmann, B., Hänsel, U., Sudbrak, R. and Haaf, T. 2004. Plasticity of human chromosome 3 during primate evolution. Genomics 83: 193-202.
4. Tom Tang, Y., Emtage, P., Funk, W.D., Hu, T., Arterburn, M., Park, E.E. and Rupp, F. 2004. TAFA: a novel secreted family with conserved cysteine residues and restricted expression in the brain. Genomics 83: 727-734.
5. Yue, Y., Grossmann, B., Ferguson-Smith, M., Yang, F. and Haaf, T. 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: Fam19a4 (mouse) mapping to 6 D3.

PRODUCT

TAFA4 siRNA (m) 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 TAFA4 shRNA Plasmid (m): sc-154059-SH and TAFA4 shRNA (m) Lentiviral Particles: sc-154059-V as alternate gene silencing products.

For independent verification of TAFA4 (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-154059A, sc-154059B and sc-154059C.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

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

TAFA4 siRNA (m) is recommended for the inhibition of TAFA4 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 TAFA4 gene expression knockdown using RT-PCR Primer: TAFA4 (m)-PR: sc-154059-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

PROTOCOLS

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