SANTA CRUZ BIOTECHNOLOGY, INC.

Fussel-18 siRNA (m): sc-145276

BACKGROUND

The sloan kettering virus (Ski) family of nuclear oncoproteins act as transcriptional regulators of TGF-β by interacting directly with SMAD proteins. Fussel-18 (functional Smad-suppressing element on chromosome 18), also known as SKOR2 (Ski family transcriptional corepressor 2), LBX1 corepressor 1-like protein, ladybird homeobox corepressor 1-like protein or CORL2, is a 1,001 amino acid protein that belongs to the Ski family. Localizing to nucleus as well as cytoplasm, Fussel-18 is expressed in cerebellum, spinal cord and testis. Fussel-18 acts as an antagonist to TGF-β in the nervous system, possibly by functioning as a transcriptional repressor of SMAD2 and SMAD3. Existing as two alternatively spliced isoforms, the gene encoding Fussel-18 maps to human chromosome 18q21.1 and mouse chromosome 18 E3.

REFERENCES

1. Arndt, S., Poser, I., Schubert, T., Moser, M. and Bosserhoff, A.K. 2005. Cloning and functional characterization of a new Ski homolog, Fussel-18, specifically expressed in neuronal tissues. Lab. Invest. 85: 1330-1341.
2. Nusbaum, C., Zody, M.C., Borowsky, M.L., Kamal, M., Kodira, C.D., Taylor, T.D., Whittaker, C.A., Chang, J.L., Cuomo, C.A., Dewar, K., FitzGerald, M.G., Yang, X., Abouelleil, A., Allen, N.R., Anderson, S., et al. 2005. DNA sequence and analysis of human chromosome 18. Nature 437: 551-555.
3. Arndt, S., Poser, I., Moser, M. and Bosserhoff, A.K. 2007. Fussel-15, a novel Ski/Sno homolog protein, antagonizes BMP signaling. Mol. Cell. Neurosci. 34: 603-611.
4. Minaki, Y., Nakatani, T., Mizuhara, E., Inoue, T. and Ono, Y. 2008. Identification of a novel transcriptional corepressor, Corl2, as a cerebellar Purkinje cell-selective marker. Gene Expr. Patterns 8: 418-423.
5. Deheuninck, J. and Luo, K. 2009. Ski and SnoN, potent negative regulators of TGF-β signaling. Cell Res. 19: 47-57.
6. Jahchan, N.S. and Luo, K. 2010. SnoN in mammalian development, function and diseases. Curr. Opin. Pharmacol. 10: 670-675.
7. Bennett, K.L., Lee, W., Lamarre, E., Zhang, X., Seth, R., Scharpf, J., Hunt, J. and Eng, C. 2010. HPV status-independent association of alcohol and tobacco exposure or prior radiation therapy with promoter methylation of FUSSEL18, EBF3, IRX1, and SEPT9, but not SLC5A8, in head and neck squamous cell carcinomas. Genes Chromosomes Cancer 49: 319-326.
8. Miyata, T., Ono, Y., Okamoto, M., Masaoka, M., Sakakibara, A., Kawaguchi, A., Hashimoto, M. and Ogawa, M. 2010. Migration, early axonogenesis, and Reelin-dependent layer-forming behavior of early/posterior-born Purkinje cells in the developing mouse lateral cerebellum. Neural Dev. 5: 23.

CHROMOSOMAL LOCATION

Genetic locus: Skor2 (mouse) mapping to 18 E3.

PROTOCOLS

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

PRODUCT

Fussel-18 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 Fussel-18 shRNA Plasmid (m): sc-145276-SH and Fussel-18 shRNA (m) Lentiviral Particles: sc-145276-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

Fussel-18 siRNA (m) is recommended for the inhibition of Fussel-18 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 Fussel-18 gene expression knockdown using RT-PCR Primer: Fussel-18 (m)-PR: sc-145276-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.