SANTA CRUZ BIOTECHNOLOGY, INC.

SNFT siRNA (m): sc-153654

BACKGROUND

SNFT, also known as BATF3 (basic leucine zipper transcription factor, ATF-like 3), JUNDM1 or JDP1, is a 127 amino acid protein that localizes to the nucleus and contains one bZIP domain. Interacting with c-Jun, SNFT functions as a negative regulator of AP-1-mediated transcription, specifically by heterodimerizing with c-Jun and binding to DNA response elements. The gene encoding SNFT maps to human chromosome 1, which spans 260 million base pairs, contains over 3,000 genes and comprises nearly 8% of the human genome. Chromosome 1 houses a large number of disease-associated genes, including those that are involved in familial adenomatous polyposis, Stickler syndrome, Parkinson's disease, Gaucher disease, schizophrenia and Usher syndrome. Aberrations in chromosome 1 are found in a variety of cancers, including head and neck cancer, malignant melanoma and multiple myeloma.

REFERENCES

1. Iacobelli, M., et al. 2000. Repression of IL-2 promoter activity by the novel basic leucine zipper p21^{SNFT} protein. J. Immunol. 165: 860-868.
2. Bower, K.E., et al. 2002. Correlation of transcriptional repression by p21^{SNFT} with changes in DNA.NF-AT complex interactions. J. Biol. Chem. 277: 34967-34977.
3. Newman, J.R., et al. 2003. Comprehensive identification of human bZIP interactions with coiled-coil arrays. Science 300: 2097-2101.
4. Bower, K.E., et al. 2004. Transcriptional repression of MMP-1 by p21^{SNFT} and reduced *in vitro* invasiveness of hepatocarcinoma cells. Oncogene 23: 8805-8814.
5. Hildner, K., et al. 2008. Batf3 deficiency reveals a critical role for CD8α^+ dendritic cells in cytotoxic T cell immunity. Science 322: 1097-1100.
6. Online Mendelian Inheritance in Man, OMIM™. 2008. Johns Hopkins University, Baltimore, MD. MIM Number: 612470. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
7. Schraml, B.U., et al. 2009. The AP-1 transcription factor Batf controls T_H17 differentiation. Nature 460: 405-409.

CHROMOSOMAL LOCATION

Genetic locus: Batf3 (mouse) mapping to 1 H6.

PRODUCT

SNFT 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 SNFT shRNA Plasmid (m): sc-153654-SH and SNFT shRNA (m) Lentiviral Particles: sc-153654-V as alternate gene silencing products.

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

SNFT siRNA (m) is recommended for the inhibition of SNFT 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 SNFT gene expression knockdown using RT-PCR Primer: SNFT (m)-PR: sc-153654-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. Sharma, M.D., et al. 2018. Activation of p53 in immature myeloid precursor cells controls differentiation into Ly6c$^+$CD103$^+$ monocytic antigen-presenting cells in tumors. Immunity 48: 91-106.

RESEARCH USE

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