SANTA CRUZ BIOTECHNOLOGY, INC.

FUS-2 siRNA (m): sc-62359

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

FUS-2 is a 314 amino acid protein encoded by the human gene NAT6. FUS-2 belongs to the acetyltransferase family and contains one N-acetyltransferase domain. Acetyltransferases are essential enzymes for a wide variety of cellular processes and mutations in acetyltransferase genes have been associated with the development of certain cancers. FUS-2 is found in the cells cytoplasm and seems to be involved in N-acetylation. FUS-2 will act on peptides with an N-terminal Met followed by Asp, Glu or Asn. It is also believed FUS-2 can also act as a tumor suppressor. FUS-2 has NAT activity but not histone acetyltransferase activity. It uses a binary ping-pong process involving the formation of a covalent NAT/acetyl-coA intermediate, whereby acetyl-coA binds to the nucleophile in the active site of the enzyme before the acetyl group is transferred to the substrate by nucleophilic attack.

REFERENCES

1. Lerman, M.I. and Minna, J.D. 2000. The 630-kb lung cancer homozygous deletion region on human chromosome 3p21.3: identification and evaluation of the resident candidate tumor suppressor genes. The International Lung Cancer Chromosome 3p21.3 Tumor Suppressor Gene Consortium. Cancer Res. 60: 6116-6133.
2. Gebauer, W., et al. 2000. Keyhole limpet hemocyanin type 2 (KLH2): detection and immunolocalization of a labile functional unit h. J. Struct. Biol. 128: 280-286.
3. Zegerman, P., et al. 2000. The putative tumour suppressor FUS-2 is an N-acetyltransferase. Oncogene 19: 161-163.
4. Polevoda, B. and Sherman, F. 2003. Composition and function of the eukaryotic N-terminal acetyltransferase subunits. Biochem. Biophys. Res. Commun. 308: 1-11.
5. Duh, F.M., et al. 2004. Characterization of a new SNP c767A/T (Arg222Trp) in the candidate TSG FUS-2 on human chromosome 3p21.3: prevalence in Asian populations and analysis of association with nasopharyngeal cancer. Mol. Cell. Probes 18: 39-44.

CHROMOSOMAL LOCATION

Genetic locus: Nat6 (mouse) mapping to 9 F1.

PRODUCT

FUS-2 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 FUS-2 shRNA Plasmid (m): sc-62359-SH and FUS-2 shRNA (m) Lentiviral Particles: sc-62359-V as alternate gene silencing products.

For independent verification of FUS-2 (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-62359A, sc-62359B and sc-62359C.

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

FUS-2 siRNA (m) is recommended for the inhibition of FUS-2 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 FUS-2 gene expression knockdown using RT-PCR Primer: FUS-2 (m)-PR: sc-62359-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.