SANTA CRUZ BIOTECHNOLOGY, INC.

MYSM1 siRNA (h): sc-78930

BACKGROUND

MYSM1 (Myb-like, SWIRM and MPN domains 1), also known as 2ADUB or KIAA1915, is an 828 amino acid nuclear protein that contains one SWIRM domain, one SANT domain and one MPN domain and exists as multiple alternatively spliced isoforms. Expressed ubiquitously with highest expression in kidney, brain and spleen, MYSM1 functions to bind double-stranded DNA and may positively regulate the transcriptional activity of AR (androgen receptor), possibly via control of histone acetylation and deubiquitination. The gene encoding MYSM1 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, Parkinsons 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

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2. Weise, A., et al. 2005. New insights into the evolution of chromosome 1. Cytogenet. Genome Res. 108: 217-222.
3. Qian, C., et al. 2005. Structure and chromosomal DNA binding of the SWIRM domain. Nat. Struct. Mol. Biol. 12: 1078-1085.
4. Marzin, Y., et al. 2006. Chromosome 1 abnormalities in multiple myeloma. Anticancer Res. 26: 953-959.
5. Da, G., et al. 2006. Structure and function of the SWIRM domain, a conserved protein module found in chromatin regulatory complexes. Proc. Natl. Acad. Sci. USA 103: 2057-2062.
6. Yoneyama, M., et al. 2007. Structural and functional differences of SWIRM domain subtypes. J. Mol. Biol. 369: 222-238.
7. Zhu, P., et al. 2007. A Histone H2A deubiquitinase complex coordinating histone acetylation and H1 dissociation in transcriptional regulation. Mol. Cell 27: 609-621.

CHROMOSOMAL LOCATION

Genetic locus: MYSM1 (human) mapping to 1p32.1.

PRODUCT

MYSM1 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 MYSM1 shRNA Plasmid (h): sc-78930-SH and MYSM1 shRNA (h) Lentiviral Particles: sc-78930-V as alternate gene silencing products.

For independent verification of MYSM1 (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-78930A, sc-78930B and sc-78930C.

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

MYSM1 siRNA (h) is recommended for the inhibition of MYSM1 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 MYSM1 gene expression knockdown using RT-PCR Primer: MYSM1 (h)-PR: sc-78930-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.

PROTOCOLS

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