SANTA CRUZ BIOTECHNOLOGY, INC.

SSAT2 siRNA (h): sc-93747

BACKGROUND

SSAT2 (spermidine/spermine N1-acetyltransferase family member 2), also known as diamine acetyltransferase 2, polyamine N-acetyltransferase 2 or thialysine N-epsilon-acetyltransferase, is a 170 amino acid protein that exists as a homodimer and belongs to the acetyltransferase family. Localizing to cytoplasm, SSAT2 is found in bone, cervix, ovary and pineal gland. SSAT2, which shares 46% amino acid identity to SSAT1, is expressed in many of the same tissues as SSAT1, however SSAT1 is more widely expressed. SSAT2 contains one N-acetyltransferase domain and functions as an enzyme, catalyzing the acetylation of polyamines, and may also act as a transcriptional co-activator. SSAT2 promotes ubiquitination of HIF-1α by stabilizing the interaction of Elongin C and VHL. The gene encoding SSAT 2 maps to human chromosome 17p13.1.

REFERENCES

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2. Chen, Y., et al. 2003. Genomic identification and biochemical characterization of a second spermidine/spermine N1-acetyltransferase. Biochem. J. 373: 661-667.
3. Coleman, C.S., et al. 2004. Spermidine/spermine-N1-acetyltransferase-2 (SSAT2) acetylates thialysine and is not involved in polyamine metabolism. Biochem. J. 384: 139-148.
4. Hector, S., et al. 2004. Polyamine catabolism in platinum drug action: Interactions between oxaliplatin and the polyamine analogue N1,N11-diethylnorspermine at the level of spermidine/spermine N1-acetyltransferase. Mol. Cancer Ther. 3: 813-822.
5. Vogel, N.L., et al. 2006. Spermidine/Spermine N1-Acetyltransferase 2 (SSAT2) functions as a coactivator for NFκB and cooperates with CBP and P/CAF to enhance NFκB-dependent transcription. Biochim. Biophys. Acta 1759: 470-477.
6. Baek, J.H., et al. 2007. Spermidine/spermine-N1-acetyltransferase 2 is an essential component of the ubiquitin ligase complex that regulates hypoxia-inducible factor 1α. J. Biol. Chem. 282: 23572-23580.

CHROMOSOMAL LOCATION

Genetic locus: SAT2 (human) mapping to 17p13.1.

PRODUCT

SSAT2 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 SSAT2 shRNA Plasmid (h): sc-93747-SH and SSAT2 shRNA (h) Lentiviral Particles: sc-93747-V as alternate gene silencing products.

For independent verification of SSAT2 (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-93747A, sc-93747B and sc-93747C.

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

SSAT2 siRNA (h) is recommended for the inhibition of SSAT2 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 SSAT2 gene expression knockdown using RT-PCR Primer: SSAT2 (h)-PR: sc-93747-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.