SANTA CRUZ BIOTECHNOLOGY, INC.

AZ1 siRNA (h): sc-105112

BACKGROUND

Antizyme 1 (AZ1) negatively regulates polyamine synthesis by enhancing the negative feedback loop controlling ornithine decarboxylase (ODC) activity. Polyamines are involved in cell cycle and cell growth, and thus the interaction between AZ1 and ODC functions in this process as well, in a regulatory manner. Furthermore, treatment of cells with leptomycin B, an inhibitor of chromosomal maintenance proteins, causes the relocation of AZ1 to the nucleus, suggesting a novel function of AZ1 not associated with the proteasome.

REFERENCES

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2. Zhang, M., Pickart, C.M. and Coffino, P. 2003. Determinants of proteasome recognition of ornithine decarboxylase, a ubiquitin-independent substrate. EMBO J. 22: 1488-1496.
3. Levillain, O., Greco, A., Diaz, J.J., Augier, R., Didier, A., Kindbeiter, K., Catez, F. and Cayre, M. 2003. Influence of testosterone on regulation of ODC, antizyme, and N1-SSAT gene expression in mouse kidney. Am. J. Physiol. Renal Physiol. 285: 498-506.
4. Murai, N., Murakami, Y. and Matsufuji, S. 2003. Identification of nuclear export signals in antizyme 1. J. Biol. Chem. 278: 44791-44798.
5. Schipper, R.G., Cuijpers, V.M., De Groot, L.H., Thio, M. and Verhofstad, A.A. 2004. Intracellular localization of ornithine decarboxylase and its regulatory protein, antizyme 1. J. Histochem. Cytochem. 52: 1259-1266.

CHROMOSOMAL LOCATION

Genetic locus: OAZ1 (human) mapping to 19p13.3.

PRODUCT

AZ1 siRNA (h) is a pool of 2 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 AZ1 shRNA Plasmid (h): sc-105112-SH and AZ1 shRNA (h) Lentiviral Particles: sc-105112-V as alternate gene silencing products.

For independent verification of AZ1 (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-105112A and sc-105112B.

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

AZ1 siRNA (h) is recommended for the inhibition of AZ1 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 AZ1 gene expression knockdown using RT-PCR Primer: AZ1 (h)-PR: sc-105112-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.