

AAT-1 siRNA (h): sc-78031

BACKGROUND

The c-Myc proto-oncogene plays a significant role in cell proliferation, differentiation, transformation and apoptosis. A novel c-Myc binding protein, MYCBP (also designated AMY-1), binds to the transactivation domain of c-Myc and stimulates the activation of E-box-dependent transcription. MYCBP translocates from the cytoplasm to the nucleus during S phase when increased expression of c-Myc occurs. MYCBP and AAT-1 (AMY-1-associating protein expressed in testis 1) have been shown to associate with AKAP 149 and AKAP 84 in mitochondria of somatic cells and sperm, which suggests a role for MYCBP and AAT-1 in spermatogenesis. Expression of the AAT-1 gene is regulated by two different promoters, which result in various isoforms. One promoter generates expression of the AAT-1, AAT-1 α , AAT-1 β and AAT-1 γ isoforms, which are specifically expressed in testis, while the other promoter generates AAT-1L, AAT-1M and AAT-1S, which are differentially expressed.

REFERENCES

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PROTOCOLS

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

CHROMOSOMAL LOCATION

Genetic locus: MAATS1 (human) mapping to 3q13.33.

PRODUCT

AAT-1 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see AAT-1 shRNA Plasmid (h): sc-78031-SH and AAT-1 shRNA (h) Lentiviral Particles: sc-78031-V as alternate gene silencing products.

For independent verification of AAT-1 (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-78031A, sc-78031B and sc-78031C.

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 μ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330 μ l of RNase-free water makes a 10 μ M solution in a 10 μ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

AAT-1 siRNA (h) is recommended for the inhibition of AAT-1 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 μ M in 66 μ l. 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 AAT-1 gene expression knockdown using RT-PCR Primer: AAT-1 (h)-PR: sc-78031-PR (20 μ l). 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.