

# AIDA-1 siRNA (m): sc-60142

## BACKGROUND

The  $\beta$ -Amyloid protein precursor (A $\beta$ PP) is a widely expressed transmembrane protein that is processed into the  $\beta$ -Amyloid (A $\beta$ ) peptide, which accumulates in insoluble plaques in the brain of Alzheimer's disease patients and A $\beta$ PP intracellular domain (AID). AID may function as a pro-apoptotic peptide, a regulator of calcium homeostasis and a molecule involved in transcriptional regulation. The AID associated protein 1 (AIDA-1) is highly expressed in the brain and is regulated by A $\beta$ PP. It interacts with A $\beta$ PP to play a role in brain development. AIDA-1 also interacts with coilin in Cajal bodies to regulate pre-mRNA splicing.

## REFERENCES

1. Fu, X., et al. 1999. EB-1, a tyrosine kinase signal transduction gene, is transcriptionally activated in the t(1;19) subset of pre-B ALL, which express oncoprotein E2a-Pbx1. *Oncogene* 18: 4920-4929.
2. Wiemels, J.L., et al. 2002. Related site-specific translocation and evidence of postnatal origin of the t(1;19) E2A-PBX1 fusion in childhood acute lymphoblastic leukemia. *Proc. Natl. Acad. Sci. USA* 99: 15101-15106.
3. Petersen, H.H., et al. 2003. Functional interaction of megalin with the megalin binding protein (MegBP), a novel tetratricopeptide repeat-containing adaptor molecule. *J. Cell Sci.* 116: 453-461.
4. LeBrun, D.P. 2003. E2A basic helix-loop-helix transcription factors in human leukemia. *Front. Biosci.* 8: s206-s222.
5. Liu, F., et al. 2003. Regulation of amyloid precursor protein expression and secretion via activation of ERK1/2 by hepatocyte growth factor in HEK293 cells transfected with APP751. *Exp. Cell Res.* 287: 387-396.
6. Ghersi, E., et al. 2004. The intracellular localization of Amyloid  $\beta$  protein precursor (A $\beta$ PP) intracellular domain associated protein-1 (AIDA-1) is regulated by A $\beta$ PP and alternative splicing. *J. Alzheimers Dis.* 6: 67-78.
7. Klodzinska, A., et al. 2004. The anxiolytic-like activity of AIDA (1-aminoin-dan-1,5-dicarboxylic acid), an mGlu 1 receptor antagonist. *J. Physiol. Pharmacol.* 55: 113-126.
8. Ghersi, E., et al. 2004. Amyloid- $\beta$  protein precursor (A $\beta$ PP) intracellular domain-associated protein-1 proteins bind to A $\beta$ PP and modulate its processing in an isoform-specific manner. *J. Biol. Chem.* 279: 49105-49112.
9. Xu, H., et al. 2005. A novel EB-1/AIDA-1 isoform, AIDA-1c, interacts with the Cajal body protein coilin. *BMC Cell Biol.* 6: 23.

## CHROMOSOMAL LOCATION

Genetic locus: Anks1b (mouse) mapping to 10 C2.

## PRODUCT

AIDA-1 siRNA (m) is a target-specific 19-25 nt siRNA designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see AIDA-1 shRNA Plasmid (m): sc-60142-SH and AIDA-1 shRNA (m) Lentiviral Particles: sc-60142-V as alternate gene silencing 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  $\mu$ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330  $\mu$ l of RNase-free water makes a 10  $\mu$ M solution in a 10  $\mu$ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

## APPLICATIONS

AIDA-1 siRNA (m) is recommended for the inhibition of AIDA-1 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  $\mu$ M in 66  $\mu$ 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 AIDA-1 gene expression knockdown using RT-PCR Primer: AIDA-1 (m)-PR: sc-60142-PR (20  $\mu$ 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.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.