

AIDA-1 siRNA (h): sc-60141

BACKGROUND

The β -Amyloid protein precursor (β APP) is a widely expressed transmembrane protein that is processed into the β -Amyloid (β) peptide, which accumulates in insoluble plaques in the brain of Alzheimer's disease patients and β APP 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 β APP. It interacts with β APP to play a role in brain development. AIDA-1 also interacts with coilin in Cajal bodies to regulate pre-mRNA splicing.

REFERENCES

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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 β protein precursor (β APP) intracellular domain associated protein-1 (AIDA-1) is regulated by β APP and alternative splicing. *J. Alzheimers Dis.* 6: 67-78.

CHROMOSOMAL LOCATION

Genetic locus: ANKS1B (human) mapping to 12q23.1.

PRODUCT

AIDA-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 AIDA-1 shRNA Plasmid (h): sc-60141-SH and AIDA-1 shRNA (h) Lentiviral Particles: sc-60141-V as alternate gene silencing products.

For independent verification of AIDA-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-60141A, sc-60141B and sc-60141C.

PROTOCOLS

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

AIDA-1 siRNA (h) is recommended for the inhibition of AIDA-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.

GENE EXPRESSION MONITORING

AIDA-1 (C-10): sc-376610 is recommended as a control antibody for monitoring of AIDA-1 gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor AIDA-1 gene expression knockdown using RT-PCR Primer: AIDA-1 (h)-PR: sc-60141-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.