SANTA CRUZ BIOTECHNOLOGY, INC.

AIDA siRNA (h): sc-88746

BACKGROUND

AIDA (Axin interactor, dorsalization associated protein), also known as C1orf80, is a 306 amino acid protein that belongs to the axin interactor family. Expressed in a variety of tissues, including skeletal muscle and heart, AIDA functions as a ventralizing factor during embryogenesis, disrupting Axin homodimerization and inhibiting Axin-mediated JNK activation. Axin, a scaffold protein, is important for both JNK signaling and the canonical Wnt pathway, two processes that play an essential role in embryonic dorsoventral patterning. Disruption of Axin by AIDA results in the negative regulation of JNK and Wnt signaling, thereby affecting embryonic developmental events. Three isoforms of AIDA exist due to alternative splicing events.

REFERENCES

1. Andersson, B., et al. 1996. A "double adaptor" method for improved shotgun library construction. Anal. Biochem. 236: 107-113.
2. Zhang, Y., et al. 1999. Axin forms a complex with MEKK1 and activates c-Jun NH_2-terminal kinase/stress-activated protein kinase through domains distinct from Wnt signaling. J. Biol. Chem. 274: 35247-35254.
3. Kimura, K., et al. 2006. Diversification of transcriptional modulation: large-scale identification and characterization of putative alternative promoters of human genes. Genome Res. 16: 55-65.
4. Deng, F., et al. 2006. Stargazin and other transmembrane AMPA receptor regulating proteins interact with synaptic scaffolding protein MAGI-2 in brain. J. Neurosci. 26: 7875-7884.
5. Rui, Y., et al. 2007. A β-catenin-independent dorsalization pathway activated by Axin/JNK signaling and antagonized by AIDA. Dev. Cell 13: 268-282.

CHROMOSOMAL LOCATION

Genetic locus: AIDA (human) mapping to 1q41.

PRODUCT

AIDA siRNA (h) 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see AIDA shRNA Plasmid (h): sc-88746-SH and AIDA shRNA (h) Lentiviral Particles: sc-88746-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 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.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

APPLICATIONS

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

GENE EXPRESSION MONITORING

AIDA (7F6): sc-81869 is recommended as a control antibody for monitoring of AIDA 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-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ 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 gene expression knockdown using RT-PCR Primer: AIDA (h)-PR: sc-88746-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

PROTOCOLS

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