SANTA CRUZ BIOTECHNOLOGY, INC.

ANKRD26 siRNA (h): sc-72498

BACKGROUND

Ankyrins are membrane adaptor molecules that play important roles in coupling integral membrane proteins to the spectrin-based cytoskeleton network. Mutations of ankyrin genes lead to severe genetic diseases such as fatal cardiac arrhythmias and hereditary spherocytosis. ANKRD26 (ankyrin repeat domain-containing protein 26) is a 1,709 amino acid protein that contains five ANK repeats. Expressed at high level in many tissues, including brain, liver, kidney and heart, ANKRD26 may be phosphorylated upon DNA damage by Atm or ATR. ANKRD26 is also expressed in the arcuate and ventromedial nuclei within the hypothalamus and in the ependyma and the circumventricular organs that act as an interface between the peripheral circulation and the brain. It is suggested that alterations in the gene encoding ANKRD26 may lead to obesity. Three isoforms of ANKRD26 exists due to alternative splicing events.

REFERENCES

1. Davis, J.Q. and Bennett, V. 1984. Brain ankyrin. A membrane-associated protein with binding sites for spectrin, tubulin, and the cytoplasmic domain of the erythrocyte anion channel. J. Biol. Chem. 259: 13550-13559.
2. Bennett, V., Baines, A.J. and Davis, J.Q. 1985. Ankyrin and synapsin: spectrin-binding proteins associated with brain membranes. J. Cell. Biochem. 29: 157-169.
3. Davis, J., Davis, L. and Bennett, V. 1989. Diversity in membrane binding sites of ankyrins. Brain ankyrin, erythrocyte ankyrin, and processed erythrocyte ankyrin associate with distinct sites in kidney microsomes. J. Biol. Chem. 264: 6417-6426.
4. Hryniewicz-Jankowska, A., Czogalla, A., Bok, E. and Sikorsk, A.F. 2002. Ankyrins, multifunctional proteins involved in many cellular pathways. Folia Histochem. Cytobiol. 40: 239-249.
5. Hahn, Y., Bera, T.K., Pastan, I.H. and Lee, B. 2006. Duplication and extensive remodeling shaped POTE family genes encoding proteins containing ankyrin repeat and coiled coil domains. Gene 366: 238-245.

CHROMOSOMAL LOCATION

Genetic locus: ANKRD26 (human) mapping to 10p12.1.

PRODUCT

ANKRD26 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see ANKRD26 shRNA Plasmid (h): sc-72498-SH and ANKRD26 shRNA (h) Lentiviral Particles: sc-72498-V as alternate gene silencing products.

For independent verification of ANKRD26 (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-72498A, sc-72498B and sc-72498C.

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 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

ANKRD26 siRNA (h) is recommended for the inhibition of ANKRD26 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 ANKRD26 gene expression knockdown using RT-PCR Primer: ANKRD26 (h)-PR: sc-72498-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.