SANTA CRUZ BIOTECHNOLOGY, INC.

α N-catenin siRNA (m): sc-43508

BACKGROUND

α-catenins are a group of proteins associated with cadherin cell-cell adhesion molecules and play indispensable roles in the function of the cadherins. α N-catenin is a linker between cadherin adhesion receptors and the Actin cytoskeleton and is essential for stabilizing dendritic spines in rodent hippocampal neurons in culture. A deletion in this protein causes cerebellar and hippocampal lamination defects and impaired startle reaction. α E- and α N-catenin appear to co-localize in cell bodies of neurons in dorsal root ganglia. In mice, α N-catenin was found to occur at the roof plate of the mesencephalon and diencephalon, coinciding with Wnt-1 expression.

REFERENCES

1. Shimamura, K., et al. 1994. Wnt-1-dependent regulation of local E-cadherin and α N-catenin expression in the embryonic mouse brain. Development 120: 2225-2234.
2. Hirano, S., et al. 1994. Differential expression of α N-catenin and N-cadherin during early development of chicken embryos. Int. J. Dev. Biol. 38: 379-384.
3. Uchida, N., et al. 1994. Mouse α N-catenin: two isoforms, specific expression in the nervous system, and chromosomal localization of the gene. Dev. Biol. 163: 75-85.
4. Shibuya, Y., et al. 1996. α N-catenin expression in the normal and regenerating chick sciatic nerve. J. Neurocytol. 25: 615-624.
5. Seto, A., et al. 1997. Alteration of E-cadherin and α N-catenin immunoreactivity in the mouse spinal cord following peripheral axotomy. J. Neuropathol. Exp. Neurol. 56: 1182-1190.
6. Park, C., et al. 2002. Deletion in Catna2, encoding α N-catenin, causes cerebellar and hippocampal lamination defects and impaired startle modulation. Nat. Genet. 31: 279-284.
7. Shibuya, Y., et al. 2003. α E- and α N-catenin expression in dorsal root ganglia and spinal cord. Kobe J. Med. Sci. 49: 93-98.
8. Abe, K., et al. 2004. Stability of dendritic spines and synaptic contacts is controlled by α N-catenin. Nat. Neurosci. 7: 357-363.

CHROMOSOMAL LOCATION

Genetic locus: Ctnna2 (mouse) mapping to 6 C3.

PRODUCT

α N-catenin siRNA (m) 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 α N-catenin shRNA Plasmid (m): sc-43508-SH and α N-catenin shRNA (m) Lentiviral Particles: sc-43508-V as alternate gene silencing products.

For independent verification of α N-catenin (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-43508A, sc-43508B and sc-43508C.

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

α N-catenin siRNA (m) is recommended for the inhibition of α N-catenin 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 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 α N-catenin gene expression knockdown using RT-PCR Primer: α N-catenin (m)-PR: sc-43508-PR (20 µl, 523 bp). 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 for detailed protocols and support products.