SANTA CRUZ BIOTECHNOLOGY, INC.

cortexin 1 siRNA (h): sc-97233

BACKGROUND

Cortexin 1, also known as CTXN or CTXN1, is an 82 amino acid single-pass membrane protein that may involved in mediating extracellular or intracellular signaling of cortical neurons during forebrain development. Cortexin 1 is encoded by a gene located on human chromosome 19, which consists of over 63 million bases, houses approximately 1,400 genes and is recognized for having the greatest gene density of the human chromosomes. It is the genetic home for a number of immunoglobulin (Ig) superfamily members, including the killer cell and leukocyte Ig-like receptors, a number of ICAMs, the CEACAM and PSG family and Fc receptors (FcRs). Key genes for eye color and hair color also map to chromosome 19.

REFERENCES

1. Watson, J.B., et al. 1994. Mouse chromosomal localization of the cortexin (Ctxn) gene. Genomics 22: 251-252.
2. Horvath, D.H., et al. 1996. Probable exclusion of the cortexin-encoding gene as a candidate for mouse neurological mutants: nervous, tottering and motor neuron degeneration. Gene 171: 305-306.
3. Trettel, F., et al. 2000. A fine physical map of the CACNA1A gene region on 19p13.1-p13.2 chromosome. Gene 241: 45-50.
4. Grimwood, J., et al. 2004. The DNA sequence and biology of human chromosome 19. Nature 428: 529-535.
5. Shabanov, P.D., et al. 2007. Comparison of behavioral effects of cortexin and cerebrolysin injected into brain ventricles. Bull. Exp. Biol. Med. 143: 437-441.
6. Shabanov, P.D., et al. 2007. Comparative study of behavioral effects of cortexin and cerebrolysine upon intraventricular and intraperitoneal administration in rats. Eksp. Klin. Farmakol. 70: 13-19.
7. Nurguzhaev, E.S., et al. 2009. Use of cortexin in the early rehabilitation period of ischemic stroke of moderate severity. Zh. Nevrol. Psikhiatr. Im. S.S. Korsakova 109: 66-69.

CHROMOSOMAL LOCATION

Genetic locus: CTXN1 (human) mapping to 19p13.2.

PRODUCT

cortexin 1 siRNA (h) is a pool of 2 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 cortexin 1 shRNA Plasmid (h): sc-97233-SH and cortexin 1 shRNA (h) Lentiviral Particles: sc-97233-V as alternate gene silencing products.

For independent verification of cortexin 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-97233A and sc-97233B.

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

cortexin 1 siRNA (h) is recommended for the inhibition of cortexin 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 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 cortexin 1 gene expression knockdown using RT-PCR Primer: cortexin 1 (h)-PR: sc-97233-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.