# cortexin 1 siRNA (m): sc-142521



The Power to Question

#### **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**

- Watson, J.B., Coulter, P.M., Xia, Y.R. and Lusis, A.J. 1994. Mouse chromosomal localization of the cortexin (Ctxn) gene. Genomics 22: 251-252.
- 2. Horvath, D.H., Watson, J.B. and Travis, G.H. 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.
- Trettel, F., Mantuano, E., Calabresi, V., Veneziano, L., Olsen, A.S., Georgescu, A., Gordon, L., Sabbadini, G., Frontali, M. and Jodice, C. 2000. A fine physical map of the CACNA1A gene region on 19p13.1-p13.2 chromosome. Gene 241: 45-50.
- Grimwood, J., Gordon, L.A., Olsen, A., Terry, A., Schmutz, J., Lamerdin, J., Hellsten, U., Goodstein, D., Couronne, O., Tran-Gyamfi, M., Aerts, A., Altherr, M., Ashworth, L., Bajorek, E., Black, S., Branscomb, E., et al. 2004. The DNA sequence and biology of human chromosome 19. Nature 428: 529-535.
- Shabanov, P.D., Lebedev, A.A., Stetsenko, V.P., Lavrov, N.V., Markov, S.V. and Vojeikov, I.V. 2007. Comparison of behavioral effects of cortexin and cerebrolysin injected into brain ventricles. Bull. Exp. Biol. Med. 143: 437-441.
- Shabanov, P.D., Lebedev, A.A., Pavlenko, V.P. and Ganapol'skii, V.P. 2007. Comparative study of behavioral effects of cortexin and cerebrolysine upon intraventricular and intraperitoneal administration in rats. Eksp. Klin. Farmakol. 70: 13-19.
- Nurguzhaev, E.S., Mitrokhin, D.A., Izbasarova, A.Sh., Nurguzhaev, A.E., Raimkulov, B.N. and Abdil'manova, B.R. 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 (mouse) mapping to 8 A1.1.

# **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.

#### **PRODUCT**

cortexin 1 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  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see cortexin 1 shRNA Plasmid (m): sc-142521-SH and cortexin 1 shRNA (m) Lentiviral Particles: sc-142521-V as alternate gene silencing products.

For independent verification of cortexin 1 (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-142521A, sc-142521B and sc-142521C.

#### 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  $\mu$ l of the RNAse-free water provided. Resuspension of the siRNA duplex in 330  $\mu$ l of RNAse-free water makes a 10  $\mu$ M solution in a 10  $\mu$ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

## **APPLICATIONS**

cortexin 1 siRNA (m) is recommended for the inhibition of cortexin 1 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 cortexin 1 gene expression knockdown using RT-PCR Primer: cortexin 1 (m)-PR: sc-142521-PR (20  $\mu$ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

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