## SANTA CRUZ BIOTECHNOLOGY, INC.

# CCDC157 siRNA (h): sc-75498



## BACKGROUND

The CCDC157 amino acid protein CCDC157 is encoded by a gene on chromosome 22. Chromosome 22 contains over 500 genes and about 49 million bases. Being the second smallest human chromosome, 22 contains a surprising variety of interesting genes. Phelan-McDermid syndrome, neurofibromatosis type 2 and autism are associated with chromosome 22. A schizophrenia susceptibility locus has been identified on chromosome 22 and studies show that 22q11 deletion symptoms include a high incidence of schizophrenia. Translocations between chromosomes 9 and 22 may lead to the formation of the Philadelphia chromosome and the subsequent production of the novel fusion protein, Bcr-Abl, a potent cell proliferation activator found in several types of leukemia.

#### REFERENCES

- Hirosawa, M., Nagase, T., Murahashi, Y., Kikuno, R. and Ohara, O. 2001. Identification of novel transcribed sequences on human chromosome 22 by expressed sequence tag mapping. DNA Res. 8: 1-9.
- Briegel, W. and Cohen, M. 2004. Chromosome 22q11 deletion syndrome and its relevance for child and adolescent psychiatry. An overview of etiology, physical symptoms, aspects of child development and psychiatric disorders. Z. Kinder Jugendpsychiatr. Psychother. 32: 107-115.
- Gothelf, D., Schaer, M. and Eliez, S. 2008. Genes, brain development and psychiatric phenotypes in velo-cardio-facial syndrome. Dev. Disabil. Res. Rev. 14: 59-68.
- Sathyamoorthi, S., Morales, J., Bermudez, J., McBride, L., Luquette, M., McGoey, R., Oates, N., Hales, S., Biegel, J.A. and Lacassie, Y. 2009. Array analysis and molecular studies of INI1 in an infant with deletion 22q13 (Phelan-McDermid syndrome) and atypical teratoid/rhabdoid tumor. Am. J. Med. Genet. A. 149A: 1067-1069.
- Vorstman, J.A., Chow, E.W., Ophoff, R.A., van Engeland, H., Beemer, F.A., Kahn, R.S., Sinke, R.J. and Bassett, A.S. 2009. Association of the PIK4CA schizophrenia-susceptibility gene in adults with the 22q11.2 deletion syndrome. Am. J. Med. Genet. B Neuropsychiatr. Genet. 150B: 430-433.

## CHROMOSOMAL LOCATION

Genetic locus: CCDC157 (human) mapping to 22q12.2.

## PRODUCT

CCDC157 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  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see CCDC157 shRNA Plasmid (h): sc-75498-SH and CCDC157 shRNA (h) Lentiviral Particles: sc-75498-V as alternate gene silencing products.

For independent verification of CCDC157 (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-75498A, sc-75498B and sc-75498C.

#### 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**

CCDC157 siRNA (h) is recommended for the inhibition of CCDC157 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  $\mu$ M in 66  $\mu$ l. 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 CCDC157 gene expression knockdown using RT-PCR Primer: CCDC157 (h)-PR: sc-75498-PR (20  $\mu$ l). 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.