SANTA CRUZ BIOTECHNOLOGY, INC.

# CDR2L siRNA (h): sc-94062

## BACKGROUND

CDR2 (cerebellar degeneration-related protein 2) is associated with the development of paraneoplastic cerebellar degeneration (PCD). PCD, an immune-mediated syndrome, belongs to a heterogeneous group of rare paraneoplastic neurologic disorders affecting the neurological system. CDR2L (cerebellar degeneration-related protein 2-like), also known as HUMPPA, is a 465 amino acid protein belonging to the CDR2 family that may have a similar function in the neurological system as CDR2. The gene encoding CDR2L is located on human chromosome 17, which comprises over 2.5% of the human genome and encodes over 1,200 genes. Two key tumor suppressor genes are associated with chromosome 17, namely, p53 and BRCA1. Tumor suppressor p53 is necessary for maintenance of cellular genetic integrity by moderating cell fate through DNA repair versus cell death. Malfunction or loss of p53 expression is associated with malignant cell growth and Li-Fraumeni syndrome. Like p53, BRCA1 is directly involved in DNA repair, though specifically it is recognized as a genetic determinant of early onset breast cancer and predisposition to cancers of the ovary, colon, prostate gland and fallopian tubes.

## REFERENCES


1. Siniscalco, M., et al. 1991. Physical and genetic mapping of the CDR gene with particular reference to its position with respect to the FRAXA site. Am. J. Med. Genet. 38: 357-362.
2. Peterson, K., et al. 1992. Paraneoplastic cerebellar degeneration. I. A clinical analysis of 55 anti-Yo antibody-positive patients. Neurology 42: 1931-1937.
3. Tanaka, M., et al. 1995. Trial to establish an animal model of paraneoplastic cerebellar degeneration with anti-Yo antibody. 1. Mouse strains bearing different MHC molecules produce antibodies on immunization with recombinant Yo protein, but do not cause Purkinje cell loss. Clin. Neurol. Neurosurg. 97: 95-100.
4. Giometto, B., et al. 1997. Sub-acute cerebellar degeneration with anti-Yo autoantibodies: immunohistochemical analysis of the immune reaction in the central nervous system. Neuropathol. Appl. Neurobiol. 23: 468-474.
5. Tanaka, M., et al. 1998. Cytotoxic T cells react with recombinant Yo protein from a patient with paraneoplastic cerebellar degeneration and anti-Yo antibody. J. Neurol. Sci. 161: 88-90.


## CHROMOSOMAL LOCATION

Genetic locus: CDR2L (human) mapping to 17q25.1.

## PRODUCT

CDR2L 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 CDR2L shRNA Plasmid (h): sc-94062-SH and CDR2L shRNA (h) Lentiviral Particles: sc-94062-V as alternate gene silencing products.

For independent verification of CDR2L (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-94062A and sc-94062B.

## 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

CDR2L siRNA (h) is recommended for the inhibition of CDR2L 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 CDR2L gene expression knockdown using RT-PCR Primer: CDR2L (h)-PR: sc-94062-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.

## PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.