

# VWC2 siRNA (h): sc-89641

## BACKGROUND

VWC2 (von Willebrand factor C domain containing 2), also known as brorin or brain-specific chordin-like protein, is a 325 amino acid secreted protein that contains two VWFC domains and belongs to the Chordin family. VWC2 expression increases during brain development, with strong levels found in neurons of the diencephalon and medulla oblongata. Acting as a bone morphogenetic protein (BMP) antagonist, VWC2 inhibits the activities of BMP-2 and BMP-6 during neurogenesis in adult and developing neural tissues, and may play a role in neural development and function. VWC2 may also have a role in promoting cell adhesion. The gene encoding VWC2 maps to human chromosome 7p12.2. Chromosome 7 is approximately 158 million base pairs long, encodes over 1,000 genes, and makes up about 5% of the human genome. Chromosome 7 has been linked to many diseases, including Osteogenesis imperfecta, Pendred syndrome, Lissencephaly, Citrullinemia and Shwachman-Diamond syndrome.

## REFERENCES

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## CHROMOSOMAL LOCATION

Genetic locus: VWC2 (human) mapping to 7p12.2.

## PRODUCT

VWC2 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  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see VWC2 shRNA Plasmid (h): sc-89641-SH and VWC2 shRNA (h) Lentiviral Particles: sc-89641-V as alternate gene silencing products.

For independent verification of VWC2 (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-89641A and sc-89641B.

## 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

VWC2 siRNA (h) is recommended for the inhibition of VWC2 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 VWC2 gene expression knockdown using RT-PCR Primer: VWC2 (h)-PR: sc-89641-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](http://www.scbt.com) for detailed protocols and support products.