

CCDC8 siRNA (h): sc-97657

BACKGROUND

The coiled-coil domain is a structural motif found in proteins that are involved in a diverse array of biological functions such as the regulation of gene expression, cell division, membrane fusion and drug extrusion and delivery. CCDC8 (coiled-coil domain-containing protein 8) is a 538 amino acid protein that is phosphorylated upon DNA damage, likely by ATM or ATR. The gene encoding CCDC8 maps to human chromosome 19, which consists of over 63 million bases and houses approximately 1,400 genes. Chromosome 19 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

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7. McFarlane, A.A., Orriss, G.L. and Stetefeld, J. 2009. The use of coiled-coil proteins in drug delivery systems. *Eur. J. Pharmacol.* 625: 101-107.
8. Banci, L., Bertini, I., Ciofi-Baffoni, S. and Tokatlidis, K. 2009. The coiled coil-helix-coiled coil-helix proteins may be redox proteins. *FEBS Lett.* 583: 1699-1702.

CHROMOSOMAL LOCATION

Genetic locus: CCDC8 (human) mapping to 19q13.32.

PROTOCOLS

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

PRODUCT

CCDC8 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see CCDC8 shRNA Plasmid (h): sc-97657-SH and CCDC8 shRNA (h) Lentiviral Particles: sc-97657-V as alternate gene silencing products.

For independent verification of CCDC8 (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-97657A and sc-97657B.

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

APPLICATIONS

CCDC8 siRNA (h) is recommended for the inhibition of CCDC8 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 μ M in 66 μ 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 CCDC8 gene expression knockdown using RT-PCR Primer: CCDC8 (h)-PR: sc-97657-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. Jiang, G.Y., Zhang, X.P., Zhang, Y., Xu, H.T., Wang, L., Li, Q.C. and Wang, E.H. 2016. Coiled-coil domain-containing protein 8 inhibits the invasiveness and migration of non-small cell lung cancer cells. *Hum. Pathol.* 56: 64-73.

RESEARCH USE

For research use only, not for use in diagnostic procedures.