

Dcun1D3 siRNA (m): sc-142909

BACKGROUND

Dcun1D3 (Dcun1 domain-containing protein 3) is a 304 amino acid protein that contains one Dcun1 domain. The Dcun1 domain is an approximately 190 residue module that is thought to have the features of a basic helix-loop-helix leucine zipper domain, a domain commonly found in transcription factors. It has been suggested that Dcun1D3 may be involved in cell cycle progression and cell growth. The gene that encodes Dcun1D3 maps to human chromosome 16, which encodes over 900 genes in approximately 90 million base pairs, makes up nearly 3% of human cellular DNA and is associated with a variety of genetic disorders. The GAN gene is located on chromosome 16 and, with mutation, may lead to giant axonal neuropathy, a nervous system disorder characterized by increasing malfunction with growth. Chromosome 16 houses the CREBBP gene that encodes a critical CREB binding protein that is responsible for the Rubinstein-Taybi syndrome, a rare disorder characterized by mental retardation and predisposition to tumor growth and white blood cell neoplasias.

REFERENCES

1. Ben Hamida, C., et al. 1997. Homozygosity mapping of giant axonal neuropathy gene to chromosome 16q24.1. *Neurogenetics* 1: 129-133.
2. Karlsson, J., et al. 2003. Novel quantitative trait loci controlling development of experimental autoimmune encephalomyelitis and proportion of lymphocyte subpopulations. *J. Immunol.* 170: 1019-1026.
3. Kurz, T., et al. 2005. The conserved protein DCN-1/Dcn1p is required for cullin neddylation in *C. elegans* and *S. cerevisiae*. *Nature* 435: 1257-1261.
4. Forabosco, P., et al. 2006. Meta-analysis of genome-wide linkage studies of systemic lupus erythematosus. *Genes Immun.* 7: 609-614.
5. Carneiro, L.A., et al. 2007. Nod-like receptors in innate immunity and inflammatory diseases. *Ann. Med.* 39: 581-593.
6. Gervasini, C., et al. 2007. High frequency of mosaic CREBBP deletions in Rubinstein-Taybi syndrome patients and mapping of somatic and germline breakpoints. *Genomics* 90: 567-573.

CHROMOSOMAL LOCATION

Genetic locus: Dcun1d3 (mouse) mapping to 7 F2.

PRODUCT

Dcun1D3 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Dcun1D3 shRNA Plasmid (m): sc-142909-SH and Dcun1D3 shRNA (m) Lentiviral Particles: sc-142909-V as alternate gene silencing products.

For independent verification of Dcun1D3 (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-142909A, sc-142909B and sc-142909C.

RESEARCH USE

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

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

Dcun1D3 siRNA (m) is recommended for the inhibition of Dcun1D3 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 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.

GENE EXPRESSION MONITORING

Dcun1D3 (F-9): sc-514506 is recommended as a control antibody for monitoring of Dcun1D3 gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor Dcun1D3 gene expression knockdown using RT-PCR Primer: Dcun1D3 (m)-PR: sc-142909-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

PROTOCOLS

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