SANTA CRUZ BIOTECHNOLOGY, INC.

CHADL siRNA (h): sc-75443

BACKGROUND

Members of the small leucine-rich proteoglycan (SLRP) family are mostly extracellular proteins that function upstream of multiple signaling cascades. They affect intracellular phosphorylation and modulate distinct pathways, such as those driven by Toll-like receptors, TGFβ and receptor tyrosine kinases. As a member of the SLRP family, CHADL (chondroadherin-like protein) is a 762 amino acid protein containing 21 LRR (leucine-rich) repeats, which promote protein-ligand interactions. Chondroadherin, a closely related protein, promotes attachment of chrondocytes, osteoblasts and fibroblasts and also plays an important role in the regulation of chrodrocyte proliferation and growth. CHADL is a secreted protein that is located in the extracellular space. There are two isoforms of CHADL that exist as a result of alternative splicing events.

REFERENCES

1. Grover, J., et al. 1997. The structure and chromosome location of the human chondroadherin gene (CHAD). Genomics 45: 379-385.
2. Camper, L., et al. 1997. Integrin α2β1 is a receptor for the cartilage matrix protein chondroadherin. J. Cell Biol. 138: 1159-1167.
3. Landgren, C., et al. 1998. The mouse chondroadherin gene: characterization and chromosomal localization. Genomics 47: 84-91.
4. Mansson, B., et al. 2001. Association of chondroadherin with collagen type II. J. Biol. Chem. 276: 32883-32888.
5. Wiberg, C., et al. 2002. Biglycan organizes collagen VI into hexagonal-like networks resembling tissue structures. J. Biol. Chem. 277: 49120-49126.
6. Wang, W., et al. 2003. Synleurin, a novel leucine-rich repeat protein that increases the intensity of pleiotropic cytokine responses. Biochem. Biophys. Res. Commun. 305: 981-988.
7. Schaefer, L. and Iozzo, R.V. 2008. Biological functions of the small leucine-rich proteoglycans: from genetics to signal transduction. J. Biol. Chem. 283: 21305-21309.

CHROMOSOMAL LOCATION

Genetic locus: CHADL (human) mapping to 22q13.2.

PRODUCT

CHADL 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see CHADL shRNA Plasmid (h): sc-75443-SH and CHADL shRNA (h) Lentiviral Particles: sc-75443-V as alternate gene silencing products.

For independent verification of CHADL (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-75443A, sc-75443B and sc-75443C.

PROTOCOLS

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

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

CHADL siRNA (h) is recommended for the inhibition of CHADL 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 CHADL gene expression knockdown using RT-PCR Primer: CHADL (h)-PR: sc-75443-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.