SANTA CRUZ BIOTECHNOLOGY, INC.

CHAD siRNA (h): sc-93796

BACKGROUND

CHAD, also known as chondroadherin, cartilage leucine-rich protein or SLRR4A, is a 359 amino acid cartilage matrix protein that plays a significant role in the regulation of chondrocyte growth and proliferation. CHAD is implicated in the adhesion of fibroblasts, osteoblasts and chondrocytes, which is mediated by interactions with Integrin $\alpha 2/\beta 1$. Existing primarily in monomeric form, CHAD is a secreted protein that localizes to the extracellular matrix and belongs to the small leucine-rich proteoglycan (SLRP) family and class IV subfamily. CHAD contains 11 LRR (leucine-rich) repeats and is present in chondrocytes of all ages. The gene encoding CHAD maps to human chromosome 17q21.33 and mouse chromosome 11 D.

REFERENCES

1. Larsson, T., et al. 1991. Cartilage matrix proteins. A basic 36-kDa protein with a restricted distribution to cartilage and bone. J. Biol. Chem. 266: 20428-20433.
2. Grover, J., et al. 1997. The structure and chromosome location of the human chondroadherin gene (CHAD). Genomics 45: 379-385.
3. Camper, L., et al. 1997. Integrin $\alpha 2\beta 1$ is a receptor for the cartilage matrix protein chondroadherin. J. Cell Biol. 138: 1159-1167.
4. Landgren, C., et al. 1998. The mouse chondroadherin gene: characterization and chromosomal localization. Genomics 47: 84-91.
5. Mansson, B., et al. 2001. Association of chondroadherin with collagen type II. J. Biol. Chem. 276: 32883-32888.
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CHROMOSOMAL LOCATION

Genetic locus: CHAD (human) mapping to 17q21.33.

PRODUCT

CHAD 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 CHAD shRNA Plasmid (h): sc-93796-SH and CHAD shRNA (h) Lentiviral Particles: sc-93796-V as alternate gene silencing products.

For independent verification of CHAD (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-93796A and sc-93796B.

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.

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

CHAD siRNA (h) is recommended for the inhibition of CHAD 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 CHAD gene expression knockdown using RT-PCR Primer: CHAD (h)-PR: sc-93796-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.