SANTA CRUZ BIOTECHNOLOGY, INC.

CNOT6L siRNA (h): sc-105221

BACKGROUND

The CCR4-NOT complex is an evolutionarily conserved, multi-component complex known to be involved in transcription as well as mRNA degradation. Various subunits (e.g., CNOT1, CNOT3) are involved in influencing nuclear hormone receptor activities. The CCR4-NOT complex is also involved in the regulation of Histone H3 lysine 4 methylation through a ubiquitin-dependent pathway that likely involves the proteasome. CNOT6L (CCR4-NOT transcription complex subunit 6-like), also known as CCR4B (carbon catabolite repressor protein 4 homolog B), is a 555 amino acid protein that belongs to the CCR4/nocturin family and localizes to cytoplasm, where it participates in deadenylation of mRNA. Existing as two alternatively spliced isoforms, CNOT6L is a component of the CCR4-NOT complex and is expressed at high levels in skeletal muscle, placenta, testis, pancreas and leukocytes. CNOT6L contains three LRR (leucine-rich) repeats and is encoded by a gene that maps to human chromosome 4q21.1.

REFERENCES

1. Albert, T.K., et al. 2000. Isolation and characterization of human orthologs of yeast CCR4-NOT complex subunits. Nucleic Acids Res. 28: 809-817.
2. Dupressoir, A., et al. 2001. Identification of four families of yCCR4- and Mg^{2+}-dependent endonuclease-related proteins in higher eukaryotes, and characterization of orthologs of yCCR4 with a conserved leucine-rich repeat essential for hCAF1/hPOP2 binding. BMC Genomics 2: 9.
3. Chen, J., et al. 2002. CCR4, a 3'-5' poly(A) RNA and ssDNA exonuclease, is the catalytic component of the cytoplasmic deadenylase. EMBO J. 21: 1414-1426.
4. Behm-Ansmant, I., et al. 2006. mRNA degradation by miRNAs and GW182 requires both CCR4:NOT deadenylase and DCP1:DCP2 decapping complexes. Genes Dev. 20: 1885-1898.
5. Morita, M., et al. 2007. Depletion of mammalian CCR4b deadenylase triggers elevation of the $p27^{Kip1}$ mRNA level and impairs cell growth. Mol. Cell. Biol. 27: 4980-4990.

CHROMOSOMAL LOCATION

Genetic locus: CNOT6L (human) mapping to 4q21.1.

PRODUCT

CNOT6L 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 CNOT6L shRNA Plasmid (h): sc-105221-SH and CNOT6L shRNA (h) Lentiviral Particles: sc-105221-V as alternate gene silencing products.

For independent verification of CNOT6L (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-105221A, sc-105221B and sc-105221C.

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 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

CNOT6L siRNA (h) is recommended for the inhibition of CNOT6L 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 CNOT6L gene expression knockdown using RT-PCR Primer: CNOT6L (h)-PR: sc-105221-PR (20 µl). 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.