SANTA CRUZ BIOTECHNOLOGY, INC.

CNOT1 siRNA (h): sc-93370

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 within the complex 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. CNOT1 (CCR4-NOT transcription complex, subunit 1), also known as NOT1, CDC39, AD-005 or NOT1H (negative regulator of transcription subunit 1 homolog), is a 2,376 amino acid protein exists as a subunit of the CCR4-NOT complex and belongs to the CNOT1 family. Highly expressed in lung, brain, placenta, heart, liver, thymus, kidney and spleen, with low expression in colon and skeletal muscle, CNOT1 undergoes alternative splicing to produce four isoforms. The gene encoding CNOT1 maps to human chromosome 16q21 and mouse chromosome 8 D1.

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. Chen, J., et al. 2001. Purification and characterization of the 1.0 MDa CCR4-NOT complex identifies two novel components of the complex. J. Mol. Biol. 314: 683-694.
3. Winkler, G.S., et al. 2006. Human CCR4-NOT complex is a ligand-dependent repressor of nuclear receptor-mediated transcription. EMBO J. 25: 3089-3099.
4. Tang, L.Y., et al. 2007. Quantitative phosphoproteome profiling of Wnt3a-mediated signaling network: indicating the involvement of ribonucleoside-diphosphate reductase M2 subunit phosphorylation at residue serine 20 in canonical Wnt signal transduction. Mol. Cell. Proteomics 6: 1952-1967.
5. Online Mendelian Inheritance in Man, OMIM™. 2008 Johns Hopkins University, Baltimore, MD. MIM Number: 604917. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/

CHROMOSOMAL LOCATION

Genetic locus: CNOT1 (human) mapping to 16q21.

PRODUCT

CNOT1 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 CNOT1 shRNA Plasmid (h): sc-93370-SH and CNOT1 shRNA (h) Lentiviral Particles: sc-93370-V as alternate gene silencing products.

For independent verification of CNOT1 (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-93370A, sc-93370B and sc-93370C.

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

CNOT1 siRNA (h) is recommended for the inhibition of CNOT1 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 CNOT1 gene expression knockdown using RT-PCR Primer: CNOT1 (h)-PR: sc-93370-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.