SANTA CRUZ BIOTECHNOLOGY, INC.

DnaJC21 siRNA (h): sc-91663

BACKGROUND

With the presence of the J domain defining a protein as a member, the DnaJ family has evolved with diverse cellular localization and functions and is one of the largest chaperone families. DnaJ heat-shock-induced proteins are derived from the bacterium *Escherichia coli* and are controlled by the htpR regulatory protein. DnaJ proteins play a critical role in the HSP 70 chaperone machine by interacting with HSP 70 to stimulate ATP hydrolysis. Members of this family contain cysteine-rich regions composed of zinc fingers that form a peptide-binding domain responsible for chaperone function. DnaJ proteins are important mediators of proteolysis and are involved in the regulation of protein degradation, exocytosis and endocytosis. DnaJC21 (DnaJ homolog subfamily C member 21), also known as DNAJA5 or JJJ1, is a 531 amino acid protein that contains two C_2H_2-type zinc fingers and one J domain. Expressed in placenta, pancreas, kidney and brain, DnaJC21 may be a co-chaperone for HSP 70.

REFERENCES

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7. Shi, Y.Y., et al. 2005. The C-terminal (331-376) sequence of *Escherichia coli* DnaJ is essential for dimerization and chaperone activity: a small angle X-ray scattering study in solution. J. Biol. Chem. 280: 22761-22768.
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CHROMOSOMAL LOCATION

Genetic locus: DNAJC21 (human) mapping to 5p13.2.

PROTOCOLS

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

PRODUCT

DnaJC21 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 DnaJC21 shRNA Plasmid (h): sc-91663-SH and DnaJC21 shRNA (h) Lentiviral Particles: sc-91663-V as alternate gene silencing products.

For independent verification of DnaJC21 (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-91663A, sc-91663B and sc-91663C.

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

DnaJC21 siRNA (h) is recommended for the inhibition of DnaJC21 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 DnaJC21 gene expression knockdown using RT-PCR Primer: DnaJC21 (h)-PR: sc-91663-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.