

DnaJC5B siRNA (h): sc-77770

BACKGROUND

The DnaJ family, one of the largest of all the chaperone families, has evolved with diverse cellular localization and functions. The presence of the J domain defines a protein as a member of the DnaJ family. DnaJ heat-shock induced proteins are derived from the bacterium *Escherichia coli* and are under the control of the htpR regulatory protein. The 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 that are composed of zinc fingers that form a peptide-binding domain responsible for the chaperone function. They are important mediators of proteolysis and are involved in the regulation of protein degradation, exocytosis and endocytosis. DnaJC5B (DnaJ homolog subfamily C member 5B), also designated β -cysteine string protein (β -CSP), is a 199 amino acid protein that contains one J domain and plays an important role in exocytosis. DnaJC5B is expressed in testis where it is tightly bound to lipid membranes. The palmitoylation level of DnaJC5B is thought to correlate with its targeting to specific membranes.

REFERENCES

1. Saito, H., et al. 1978. Organization and expression of the dnaJ and dnaK genes of *Escherichia coli* K12. Mol. Gen. Genet. 164: 1-8.
2. Georgopoulos, C.P., et al. 1980. Identification of the *E. coli* dnaJ gene product. Mol. Gen. Genet. 178: 583-588.
3. Suh, W.C., et al. 1998. Interaction of the Hsp70 molecular chaperone, DnaK, with its cochaperone DnaJ. Proc. Natl. Acad. Sci. USA 95: 15223-15228.
4. Brown, H., et al. 1998. Cysteine string protein (CSP) is an Insulin secretory granule-associated protein regulating β -cell exocytosis. EMBO J. 17: 5048-5058.
5. Boal, F., et al. 2004. The variable C-terminus of cysteine string proteins modulates exocytosis and protein-protein interactions. Biochemistry 43: 16212-16223.

CHROMOSOMAL LOCATION

Genetic locus: DNAJC5B (human) mapping to 8q13.1.

PRODUCT

DnaJC5B 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see DnaJC5B shRNA Plasmid (h): sc-77770-SH and DnaJC5B shRNA (h) Lentiviral Particles: sc-77770-V as alternate gene silencing products.

For independent verification of DnaJC5B (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-77770A, sc-77770B and sc-77770C.

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 μ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330 μ l of RNase-free water makes a 10 μ M solution in a 10 μ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

DnaJC5B siRNA (h) is recommended for the inhibition of DnaJC5B 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 μ M in 66 μ l. 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 DnaJC5B gene expression knockdown using RT-PCR Primer: DnaJC5B (h)-PR: sc-77770-PR (20 μ l). 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.