SANTA CRUZ BIOTECHNOLOGY, INC.

DnaJC14 siRNA (m): sc-143101

BACKGROUND

The DnaJ family is one of the largest of all the chaperone families and 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 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. DnaJ proteins are important mediators of proteolysis and are involved in the regulation of protein degradation, exocytosis and endocytosis. DnaJC14 (DnaJ homolog subfamily C member 14), also known as DRIP78 (dopamine receptor-interacting protein of 78 kDa) and HDJ3 (human DnaJ protein 3), is a 702 amino acid endoplasmic reticulular membrane protein that contains one J domain. DnaJC14 regulates the export of target proteins, such as the dopamine D1 receptor (D1DR), from the endoplasmic reticulum to the cell surface.

REFERENCES

1. Bermak, J.C., Li, M., Bullock, C. and Zhou, Q.Y. 2001. Regulation of transport of the dopamine D1 receptor by a new membrane-associated ER protein. Nat. Cell Biol. 3: 492-498.
2. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 606092. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
3. Chen, J., Huang, Y., Wu, H., Ni, X., Cheng, H., Fan, J., Gu, S., Gu, X., Cao, G., Ying, K., Mao, Y., Lu, Y. and Xie, Y. 2003. Molecular cloning and characterization of a novel human J-domain protein gene (HDJ3) from the fetal brain. J. Hum. Genet. 48: 217-221.
4. Wittwer, C., Chowdhary, B.P. and Distl, O. 2005. Radiation hybrid mapping of equine CDK2, DGKA, DNAJC14, MMP19, CTSL and GAS1. Anim. Genet. 36: 536-537.

CHROMOSOMAL LOCATION

Genetic locus: Dnajc14 (mouse) mapping to 10 D3.

PRODUCT

DnaJC14 siRNA (m) is a target-specific 19-25 nt siRNA 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 DnaJC14 shRNA Plasmid (m): sc-143101-SH and DnaJC14 shRNA (m) Lentiviral Particles: sc-143101-V as alternate gene silencing products.

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

DnaJC14 siRNA (m) is recommended for the inhibition of DnaJC14 expression in mouse 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 DnaJC14 gene expression knockdown using RT-PCR Primer: DnaJC14 (m)-PR: sc-143101-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.