SANTA CRUZ BIOTECHNOLOGY, INC.

HYPK siRNA (h): sc-90067

BACKGROUND

Huntington disease is a neurodegenerative genetic disorder that affects muscle coordination and may result in psychiatric and cognitive disorders. Increases in the number of N-terminally located glutamines present in the Huntingtin (Htt) protein results in misfolding and aggregation with other proteins, and may be the cause of Huntington disease. HYPK (huntingtin-interacting protein K), also known as C15orf63 or HSPC136, is a 129 amino acid protein that likely interacts with Htt, as well as NatA, and may modulate aggregate formation with Htt. Predicted to be an intrinsically unstructured protein with a premolten globule like configuration, HYPK changes conformation in the presence of increased Ca^{2+} levels. HYPL exists as two alternatively spliced isoforms, and is encoded by a gene that maps to human chromosome 15q15.3 and mouse chromosome 2 E5.

REFERENCES

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2. Raychaudhuri, S., Sinha, M., Mukhopadhyay, D. and Bhattacharyya, N.P. 2008. HYPK, a Huntingtin interacting protein, reduces aggregates and apoptosis induced by N-terminal Huntingtin with 40 glutamines in Neuro2a cells and exhibits chaperone-like activity. Hum. Mol. Genet. 17: 240-255.
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5. Szolajska, E. and Chroboczek, J. 2011. Faithful chaperones. Cell. Mol. Life Sci. 68: 3307-3322.
6. Ghose, J., Sinha, M., Das, E., Jana, N.R. and Bhattacharyya, N.P. 2011. Regulation of miR-146a by RelA/NFκB and p53 in STHdh(Q111)/Hdh(Q111) cells, a cell model of Huntington's disease. PLoS ONE 6: e23837.

CHROMOSOMAL LOCATION

Genetic locus: HYPK (human) mapping to 15q15.3.

PRODUCT

HYPK siRNA (h) is a pool of 2 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 HYPK shRNA Plasmid (h): sc-90067-SH and HYPK shRNA (h) Lentiviral Particles: sc-90067-V as alternate gene silencing products.

For independent verification of HYPK (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-90067A and sc-90067B.

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

HYPK siRNA (h) is recommended for the inhibition of HYPK 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 HYPK gene expression knockdown using RT-PCR Primer: HYPK (h)-PR: sc-90067-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.

PROTOCOLS

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