



Hippi siRNA (m): sc-145971

BACKGROUND

Programmed neuronal cell death is a feature of neurodegenerative disorders such as Alzheimer's and Huntington's disease, which occur later in human life. Huntington's disease at the molecular and cell level is characterized by polyglutamine expansion of the protein huntingtin (Htt) that leads to apoptosis-mediated neurodegenerative loss of medium spiny neurons throughout the striatum. Polyglutamine expansion reduces the level of association between Hip-1 and Htt, thereby increasing levels of free Hip-1 that then can be the candidate protein Hippi (Hip-1 protein interactor). The Hippi-Hip-1 heterodimer is a pro-apoptotic complex that recruits procaspase-8 and initiates caspase-8 activation, which may contribute to the neuronal cell death observed in individuals diagnosed with Huntington's disease. The human hippi gene maps to chromosome 3q13.13 and encodes a 429 amino acid protein.

REFERENCES

1. Wanker, E.E. 2002. Hip1 and Hippi participate in a novel cell death-signaling pathway. *Dev. Cell* 2: 126-128.
2. Gervais, F.G., Singaraja, R., Xanthoudakis, S., Gutekunst, C.A., Leavitt, B.R., Metzler, M., Hackam, A.S., Tam, J., Vaillancourt, J.P., Houtzager, V., Rasper, D.M., Roy, S., Hayden, M.R. and Nicholson, D.W. 2002. Recruitment and activation of caspase-8 by the Huntingtin-interacting protein Hip-1 and a novel partner Hippi. *Nat. Cell Biol.* 4: 95-105.
3. Ferrier, V. 2002. Hip, Hip, Hippi! *Nat. Cell Biol.* 4: E30.
4. MacFarlane, M. 2002. Hippi-Hip1—a deadly duo. *Trends Pharmacol. Sci.* 23: 210.
5. Mattson, M.P. 2002. Accomplices to neuronal death. *Nature* 415: 377-379.
6. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 606621. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
7. LocusLink Report (LocusID: 55081). <http://www.ncbi.nlm.nih.gov/LocusLink/>

CHROMOSOMAL LOCATION

Genetic locus: Ift57 (mouse) mapping to 16 B5.

PRODUCT

Hippi siRNA (m) 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 Hippi shRNA Plasmid (m): sc-145971-SH and Hippi shRNA (m) Lentiviral Particles: sc-145971-V as alternate gene silencing products.

For independent verification of Hippi (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-145971A, sc-145971B and sc-145971C.

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

Hippi siRNA (m) is recommended for the inhibition of Hippi 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 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.

GENE EXPRESSION MONITORING

Hippi (D-6): sc-390120 is recommended as a control antibody for monitoring of Hippi gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor Hippi gene expression knockdown using RT-PCR Primer: Hippi (m)-PR: sc-145971-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.