SANTA CRUZ BIOTECHNOLOGY, INC.

HIP2 siRNA (m): sc-41985

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The Power to Question

BACKGROUND

HIP1 (Huntingtin-interacting protein 1), a membrane-associated protein, and HIP2 bind specifically to the N-terminus of human Huntingtin. HIP1 and HIP2 are ubiquitously expressed in different brain regions at low levels and exhibit nearly identical subcellular fractionation as Huntingtin. The Huntingtin-HIP1 interaction is inversely correlated to the polyglutamine length in Huntingtin, suggesting that loss of normal Huntingtin-HIP1 interaction may compromise the membrane-cytoskeletal integrity in the brain. Conversely, the Huntingtin-HIP2 interaction is not affected by the polyglutamine length in the Huntingtin protein. However, both HIP1 and HIP2 play an important role in the pathogenesis of Huntington disease (HD).

REFERENCES

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2. Kalchman, M.A., et al. 1996. Huntingtin is ubiquitinated and interacts with a specific ubiquitin-conjugating enzyme. J. Biol. Chem. 271: 19385-19394.
3. Tanno, Y., et al. 1999. Localization of Huntingtin-interacting protein-2 (HIP2) mRNA in the developing mouse brain. J. Chem. Neuroanat. 17: 99-107.
4. Wang, Y., et al. 2000. YAC/BAC-based physical and transcript mapping around the gracile axonal dystrophy (gad) locus identifies Uchl1, Pmx2b, Atp3a2, and HIP2 genes. Genomics 66: 333-336.
5. Lee, S.J., et al. 2001. E3 ligase activity of RING finger proteins that interact with HIP2, a human ubiquitin-conjugating enzyme. FEBS Lett. 503: 61-64.
6. Song, S., et al. 2003. Essential role of E2-25K/HIP2 in mediating amyloid-β neurotoxicity. Mol. Cell 12: 553-563.
7. Wesierska-Gadek, J., et al. 2007. Roscovitine-activated HIP2 kinase induces phosphorylation of wt p53 at Ser 46 in human MCF-7 breast cancer cells. J. Cell. Biochem. 100: 865-874.
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CHROMOSOMAL LOCATION

Genetic locus: Ube2k (mouse) mapping to 5 C3.1.

PRODUCT

HIP2 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see HIP2 shRNA Plasmid (m): sc-41985-SH and HIP2 shRNA (m) Lentiviral Particles: sc-41985-V as alternate gene silencing products.

For independent verification of HIP2 (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-41985A, sc-41985B and sc-41985C.

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

HIP2 siRNA (m) is recommended for the inhibition of HIP2 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.

GENE EXPRESSION MONITORING

HIP2 (H-6): sc-390339 is recommended as a control antibody for monitoring of HIP2 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-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ 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 HIP2 gene expression knockdown using RT-PCR Primer: HIP2 (m)-PR: sc-41985-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.