



Duo siRNA (m): sc-41987

BACKGROUND

HAP1 (huntingtin-associated protein 1) binds to huntingtin. Huntingtin is a protein that contains a polyglutamine region and when the number of glutamine repeats exceeds 35, the gene encodes a version of huntingtin that leads to Huntington's disease (HD). The ability of HAP1 to bind to huntingtin is enhanced by an expanded polyglutamine repeat region. HAP1 shows neuronal localization and moves with huntingtin in nerve fibers. HAP1 is primarily expressed in brain tissue, with greater expression in the olfactory bulb and brain stem. Mouse HAP1 is localized to membrane-bound organelles including large endosomes, tubulovesicular structures and budding vesicles in neurons. Duo, also designated huntingtin-associated protein interacting protein or HAPIP, binds huntingtin-associated protein 1 (HAP1) and may have a role in vesicle trafficking and cytoskeletal function.

REFERENCES

1. Macdonald, M.E., et al. 1993. A novel gene containing a trinucleotide repeat that is expanded and unstable on Huntington's disease chromosomes. *Cell* 72: 971-983.
2. Li, X.J., et al. 1995. A huntingtin-associated protein enriched in brain with implications for pathology. *Nature* 378: 398-402.
3. Gusella, J.F., et al. 1996. Huntington's disease. *Cold Spring Harb. Symp. Quant. Biol.* 61: 615-626.
4. Li, X.J., et al. 1996. Huntingtin-associated protein (HAP1): discrete neuronal localization in the brain resemble those of neuronal nitric oxide synthase. *Proc. Natl. Acad. Sci. USA* 93: 4839-4844.
5. Block-Galarza, J., et al. 1997. Fast transport and retrograde movement of huntingtin and HAP 1 in axons. *Neuroreport* 8: 2247-2251.
6. Martin, E.J., et al. 1999. Analysis of Huntingtin associated protein 1 in mouse brain and immortalized striatal neurons. *J. Comp. Neurol.* 403: 421-430.
7. LocusLink Report (LocusID: 8997). <http://www.ncbi.nlm.nih.gov/LocusLink/>

CHROMOSOMAL LOCATION

Genetic locus: *Kalrn* (mouse) mapping to 16 B3.

PRODUCT

Duo shRNA Plasmid (m) is a target-specific lentiviral vector plasmid encoding a 19-25 nt (plus hairpin) shRNA designed to knock down gene expression. Each plasmid contains a puromycin resistance gene for the selection of cells stably expressing shRNA. Each vial contains 20 µg of lyophilized shRNA plasmid DNA. Suitable for up to 20 transfections. Also see Duo siRNA (m): sc-41987 and Duo shRNA (m) Lentiviral Particles: sc-41987-V as alternate gene silencing products.

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

Duo siRNA (m) is recommended for the inhibition of Duo 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 Duo gene expression knockdown using RT-PCR Primer: Duo (m)-PR: sc-41987-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.