SANTA CRUZ BIOTECHNOLOGY, INC.

HSMNP1 siRNA (h): sc-72046

BACKGROUND

HSMNP1 (hypothalamus protein 1), also known as DBNDD2 (dysbindin domain-containing protein 2) or CK1BP (casein kinase I binding protein), is a 261 amino acid member of the dysbindin family and is a paralog of dysbindin, a protein trafficking protein involved in lysosome biosynthesis that has been associated with schizophrenia and muscular dystrophy. Human and rat HSMNP1 share 86% identity and both proteins contain three casein kinase II and PKC (protein kinase C) phosphorylation sites, a putative N-glycosylation site and a PEST motif at the C-terminus. HSMNP1 is a cytoplasmic protein and it specifically localizes to vesicles during the induction of apoptosis. In addition, HSMNP1 may be involved in normal as well as pathological myeloid development. Two isoforms of HSMNP1 exist due to alternative splicing events.

REFERENCES

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2. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 611453. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
3. Talbot, K., Eidem, W.L., Tinsley, C.L., Benson, M.A., Thompson, E.W., Smith, R.J., Hahn, C.G., Siegel, S.J., Trojanowski, J.Q., Gur, R.E., Blake, D.J. and Arnold, S.E. 2004. Dysbindin-1 is reduced in intrinsic, glutamatergic terminals of the hippocampal formation in schizophrenia. J. Clin. Invest. 113: 1353-1363.
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5. Yin, H., Laguna, K.A., Li, G. and Kuret, J. 2006. Dysbindin structural homologue CK1BP is an isoform-selective binding partner of human casein kinase-1. Biochemistry 45: 5297-5308.

CHROMOSOMAL LOCATION

Genetic locus: DBNDD2 (human) mapping to 20q13.12.

PRODUCT

HSMNP1 siRNA (h) 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 HSMNP1 shRNA Plasmid (h): sc-72046-SH and HSMNP1 shRNA (h) Lentiviral Particles: sc-72046-V as alternate gene silencing products.

For independent verification of HSMNP1 (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-72046A, sc-72046B and sc-72046C.

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

HSMNP1 siRNA (h) is recommended for the inhibition of HSMNP1 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.

GENE EXPRESSION MONITORING

HSMNP1 (C-9): sc-514709 is recommended as a control antibody for monitoring of HSMNP1 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 HSMNP1 gene expression knockdown using RT-PCR Primer: HSMNP1 (h)-PR: sc-72046-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.