SANTA CRUZ BIOTECHNOLOGY, INC.

HAPLN4 siRNA (m): sc-62442

BACKGROUND

HAPLN4 (hyaluronan and proteoglycan link protein 4) is a 360 amino acid protein encoded by the human gene HAPLN4. HAPLN4 belongs to the HAPLN family and contains one Ig-like C2-type (immunoglobulin-like) domain and two Link domains. HAPLN4 mediates the binding of complexes containing hyaluronic acid. HAPLN2 mediates a firm binding of versican V2 to hyaluronic acid. HAPLN4 is believed to play a pivotal role in the formation of the hyaluronan-associated matrix in the central nervous system (CNS), which facilitates neuronal conduction and general structural stabilization. HAPLN4 may also be involved in the formation of extracellular matrices contributing to perineuronal nets and facilitate the understanding of a functional role of these extracellular matrices. HAPLN4 is widely expressed with highest levels in spleen and placenta.

REFERENCES

1. Deyst, K.A., et al. 1996. Production of hyaluronan-dependent pericellular matrix by embryonic rat glial cells. Brain Res. Dev. Brain Res. 88: 122-125.
2. Hirakawa, S., et al. 2000. The brain link protein-1 (BRAL1): cDNA cloning, genomic structure, and characterization as a novel link protein expressed in adult brain. Biochem. Biophys. Res. Commun. 276: 982-989.
3. Nomoto, H., et al. 2002. Human BRAL1 and BCAN genes that belong to the link-module superfamily are tandemly arranged on chromosome 1q21-23. Acta Med. Okayama 56: 25-29.
4. Spicer, A.P., et al. 2003. A hyaluronan binding link protein gene family whose members are physically linked adjacent to chondroitin sulfate proteoglycan core protein genes: the missing links. J. Biol. Chem. 278: 21083-21091.
5. Oohashi, T., et al. 2004. Bral1, Bral: the novel brain specific-hyaluronan and protoglycan link protein genes. Tanpakushitsu Kakusan Koso 49: 2354-2361.
6. Carulli, D., et al. 2005. Composition of perineuronal nets in the adult rat cerebellum and the cellular origin of their components. J. Comp. Neurol. 494: 559-577.

CHROMOSOMAL LOCATION

Genetic locus: Hapln4 (mouse) mapping to 8 B3.3.

PRODUCT

HAPLN4 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 HAPLN4 shRNA Plasmid (m): sc-62442-SH and HAPLN4 shRNA (m) Lentiviral Particles: sc-62442-V as alternate gene silencing products.

For independent verification of HAPLN4 (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-62442A, sc-62442B and sc-62442C.

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

HAPLN4 siRNA (m) is recommended for the inhibition of HAPLN4 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

HAPLN4 (H-6): sc-271450 is recommended as a control antibody for monitoring of HAPLN4 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 HAPLN4 gene expression knockdown using RT-PCR Primer: HAPLN4 (m)-PR: sc-62442-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.