SANTA CRUZ BIOTECHNOLOGY, INC.

h-prune siRNA (h): sc-75218

BACKGROUND

h-prune, also known as DRES17 *(Drosophila*-related expressed sequence 17) or prune, is a 453 amino acid protein that localizes to the cytoplasm and the nucleus, as well as to the cell junction, and belongs to the prune subfamily of PPase class C proteins. Expressed ubiquitously, h-prune exists as a homooligomer that uses manganese as a cofactor and functions as a phosphodiesterase, effectively catalyzing the conversion of a diphosphate to two free phosphates and playing a role in cell proliferation and cell motility. h-prune is overexpressed in aggressive sarcoma subtypes, such as leiomyosarcomas and malignant fibrous histiocytomas (MFH), suggesting a role in tumor development and metastasis. Multiple isoforms of h-prune exist due to alternative splicing events.

REFERENCES

1. Volorio, S., et al. 1998. Sequencing analysis of forty-eight human image cDNA clones similar to *Drosophila* mutant protein. DNA Seq. 9: 307-315.
2. Reymond, A., et al. 1999. Evidence for interaction between human PRUNE and nm23-H1 NDPKinase. Oncogene 18: 7244-7252.
3. Forus, A., et al. 2001. Amplification and overexpression of PRUNE in human sarcomas and breast carcinomas-α possible mechanism for altering the nm23-H1 activity. Oncogene 20: 6881-6890.
4. Zollo, M., et al. 2005. Overexpression of h-prune in breast cancer is correlated with advanced disease status. Clin. Cancer Res. 11: 199-205.
5. Kobayashi, T., et al. 2006. Glycogen synthase kinase 3 and h-prune regulate cell migration by modulating focal adhesions. Mol. Cell. Biol. 26: 898-911.

CHROMOSOMAL LOCATION

Genetic locus: PRUNE (human) mapping to 1q21.3.

PRODUCT

h-prune 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 h-prune shRNA Plasmid (h): sc-75218-SH and h-prune shRNA (h) Lentiviral Particles: sc-75218-V as alternate gene silencing products.

For independent verification of h-prune (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-75218A, sc-75218B and sc-75218C.

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

h-prune siRNA (h) is recommended for the inhibition of h-prune 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

h-prune (F-5): sc-393318 is recommended as a control antibody for monitoring of h-prune 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 h-prune gene expression knockdown using RT-PCR Primer: h-prune (h)-PR: sc-75218-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. Scoma, E.R., et al. 2023. Human prune regulates the metabolism of mammalian inorganic polyphosphate and bioenergetics. Int. J. Mol. Sci. 24: 13859.

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.