# h-prune (H-53): sc-292162



The Power to Question

## **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 homoligomer 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., Simon, G., Repetto, M., Cucciardi, M., Banfi, S., Borsani, G., Ballabio, A. and Zollo, M. 1998. Sequencing analysis of forty-eight human image cDNA clones similar to *Drosophila* mutant protein. DNA Seq. 9: 307-315.
- Reymond, A., Volorio, S., Merla, G., Al-Maghtheh, M., Zuffardi, O., Bulfone, A., Ballabio, A. and Zollo, M. 1999. Evidence for interaction between human PRUNE and nm23-H1 NDPKinase. Oncogene 18: 7244-7252.
- 3. Forus, A., D'Angelo, A., Henriksen, J., Merla, G., Maelandsmo, G.M., Flørenes, V.A., Olivieri, S., Bjerkehagen, B., Meza-Zepeda, L.A., del Vecchio Blanco, F., Müller, C., 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., Andrè, A., Cossu, A., Sini, M.C., D'Angelo, A., Marino, N., Budroni, M., Tanda, F., Arrigoni, G. and Palmieri, G. 2005. Overexpression of h-prune in breast cancer is correlated with advanced disease status. Clin. Cancer Res. 11: 199-205.
- Kobayashi, T., Hino, S., Oue, N., Asahara, T., Zollo, M., Yasui, W. and Kikuchi, A. 2006. Glycogen synthase kinase 3 and h-prune regulate cell migration by modulating focal adhesions. Mol. Cell. Biol. 26: 898-911.
- Middelhaufe, S., Garzia, L., Ohndorf, U.M., Kachholz, B., Zollo, M. and Steegborn, C. 2007. Domain mapping on the human metastasis regulator protein h-Prune reveals a C-terminal dimerization domain. Biochem. J. 407: 199-205.
- 7. Marino, N. and Zollo, M. 2007. Understanding h-prune biology in the fight against cancer. Clin. Exp. Metastasis 24: 637-645.
- 8. Tammenkoski, M., Koivula, K., Cusanelli, E., Zollo, M., Steegborn, C., Baykov, A.A. and Lahti, R. 2008. Human metastasis regulator protein H-prune is a short-chain exopolyphosphatase. Biochemistry 47: 9707-9713.

## CHROMOSOMAL LOCATION

Genetic locus: PRUNE (human) mapping to 1q21.3; Prune (mouse) mapping to 3 F2.1.

# **RESEARCH USE**

For research use only, not for use in diagnostic procedures.

#### **SOURCE**

h-prune (H-53) is a rabbit polyclonal antibody raised against amino acids 197-249 mapping within an internal region of h-prune of human origin.

## **PRODUCT**

Each vial contains 200  $\mu g$  lgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## **APPLICATIONS**

h-prune (H-53) is recommended for detection of h-prune of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

h-prune (H-53) is also recommended for detection of h-prune in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for h-prune siRNA (h): sc-75218, h-prune siRNA (m): sc-75219, h-prune shRNA Plasmid (h): sc-75218-SH, h-prune shRNA Plasmid (m): sc-75219-SH, h-prune shRNA (h) Lentiviral Particles: sc-75218-V and h-prune shRNA (m) Lentiviral Particles: sc-75219-V.

Molecular Weight of h-prune: 50 kDa.

# **RECOMMENDED SECONDARY REAGENTS**

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit lgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit lgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit lgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit lgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

### **STORAGE**

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required

#### **PROTOCOLS**

See our web site at www.scbt.com or our catalog for detailed protocols and support products.



Try **h-prune (F-5): sc-393318**, our highly recommended monoclonal alternative to h-prune (H-53).