



## nm23-H5 (L-12): sc-107822

### BACKGROUND

The nm23 gene family is implicated in a variety of biological processes, including cell proliferation, differentiation and development, signal transduction, G protein-coupled receptor endocytosis, and gene expression. Members of the nm23 family are putative metastasis suppressor genes that encode nucleoside diphosphate kinases (NDPK). NDPKs form oligomers that play a role in the synthesis of nucleoside triphosphates other than ATP. Nm23-H1, nm23-H2 and nm23-H3 are indicators of a poor prognosis in human hematopoietic malignancies, as high expression levels of nm23-H1 and -H2 are positively correlated with histological differentiation. Nm23-H5 is specifically expressed in germinal cells of testis, where it plays a critical role in spermiogenesis by increasing the cellular levels of GPX-5 to eliminate reactive oxygen species.

### REFERENCES

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2. Munier, A., Feral, C., Milon, L., Pinon, V.P., Gyapay, G., Capeau, J., Guellaen, G. and Lacombe, M.L. 1998. A new human nm23 homologue (nm23-H5) specifically expressed in testis germinal cells. *FEBS Lett.* 434: 289-294.
3. Venturelli, D., Cesi, V., Ransac, S., Engelhard, A., Perrotti, D. and Calabretta, B. 2000. The nucleoside diphosphate kinase activity of DRnm23 is not required for inhibition of differentiation and induction of apoptosis in 32Dcl3 myeloid precursor cells. *Exp. Cell Res.* 257: 265-271.
4. Hwang, K.C., Ok, D.W., Hong, J.C., Kim, M.O. and Kim, J.H. 2003. Cloning, sequencing, and characterization of the murine nm23-M5 gene during mouse spermatogenesis and spermiogenesis. *Biochem. Biophys. Res. Commun.* 306: 198-207.
5. Munier, A., Serres, C., Kann, M.L., Boissan, M., Lesaffre, C., Capeau, J., Fouquet, J.P. and Lacombe, M.L. 2003. Nm23/NDP kinases in human male germ cells: role in spermiogenesis and sperm motility? *Exp. Cell Res.* 289: 295-306.
6. Choi, Y.J., Cho, S.K., Hwang, K.C., Park, C., Kim, J.H., Park, S.B., Hwang, S. and Kim, J.H. 2009. Nm23-M5 mediates round and elongated spermatid survival by regulating GPX-5 levels. *FEBS Lett.* 583: 1292-1298.

### CHROMOSOMAL LOCATION

Genetic locus: NME5 (human) mapping to 5q31.2; Nme5 (mouse) mapping to 18 B1.

### SOURCE

nm23-H5 (L-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of nm23-H5 of human origin.

### STORAGE

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

### PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-107822 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### APPLICATIONS

nm23-H5 (L-12) is recommended for detection of nm23-H5 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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); non cross-reactive with other nm23-H family members.

Suitable for use as control antibody for nm23-H5 siRNA (h): sc-91797, nm23-H5 siRNA (m): sc-150006, nm23-H5 shRNA Plasmid (h): sc-91797-SH, nm23-H5 shRNA Plasmid (m): sc-150006-SH, nm23-H5 shRNA (h) Lentiviral Particles: sc-91797-V and nm23-H5 shRNA (m) Lentiviral Particles: sc-150006-V.

Molecular Weight of nm23-H5: 24 kDa.

### RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

### RESEARCH USE

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

### PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.