

# nm23-H2 (L-16): sc-17587

## BACKGROUND

The nm23 gene, a potential suppressor of metastasis, was originally identified by differential hybridization between two murine melanoma sub-lines, one with a high and the second with a low metastatic capacity. Highly metastatic sub-lines exhibit much lower levels of nm23 than less metastatic cells. Based on sequence analysis, nm23 appears highly related to nucleotide diphosphate kinases (NDP). In humans, NDP kinases A and B are identical to two isoforms of human nm23 homologs, namely nm23-H1 and H2, respectively. nm23-H2 is identical in sequence to PuF, a transcription factor that binds to nuclease-hypersensitive elements at positions 142 to 115 of the human C-Myc promoter.

## REFERENCES

1. Steeg, P.S., et al. 1988. Evidence for a novel gene associated with low tumor metastatic potential. *J. Natl. Cancer Inst.* 80: 200-209.
2. Lacombe, M., et al. 1990. Functional cloning of a nucleoside diphosphate kinase from *Dictyostelium discoideum*. *J. Biol. Chem.* 265: 10012-10018.
3. Kimura, N., et al. 1990. Isolation and characterization of a cDNA clone encoding rat nucleoside diphosphate kinase. *J. Biol. Chem.* 265: 15744-15749.
4. Stahl, J.A., et al. 1991. Identification of a second human nm23 gene, nm23-H2. *Cancer Res.* 51: 445-449.
5. Urano, T., et al. 1992. Molecular cloning and functional expression of the second mouse nm23/NDP kinase gene, nm23-M2. *FEBS Lett.* 309: 358-362.
6. Urano, T., et al. 1993. Expression of nm23/NDP kinase proteins on the cell surface. *Oncogene* 8: 1371-1376.
7. Postel, E.H., et al. 1993. Human c-Myc transcription factor PuF identified as nm23-H2 nucleoside diphosphate kinase, a candidate suppressor of tumor metastasis. *Science* 261: 478-480.

## CHROMOSOMAL LOCATION

Genetic locus: NME1/NME2 (human) mapping to 17q21.33; Nme2 (mouse) mapping to 11 D.

## SOURCE

nm23-H2 (L-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of nm23-H2 of human origin.

## 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-17587 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

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

## APPLICATIONS

nm23-H2 (L-16) is recommended for detection of nm23-H2 and NDK8 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).

nm23-H2 (L-16) is also recommended for detection of nm23-H2 and NDK8 in additional species, including canine and bovine.

Suitable for use as control antibody for nm23-H2 siRNA (h): sc-40774, nm23-H2 siRNA (m): sc-40775, nm23-H2 siRNA (r): sc-72195, nm23-H2 shRNA Plasmid (h): sc-40774-SH, nm23-H2 shRNA Plasmid (m): sc-40775-SH, nm23-H2 shRNA Plasmid (r): sc-72195-SH, nm23-H2 shRNA (h) Lentiviral Particles: sc-40774-V, nm23-H2 shRNA (m) Lentiviral Particles: sc-40775-V and nm23-H2 shRNA (r) Lentiviral Particles: sc-72195-V.

Molecular Weight of nm23-H2: 17 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204 or NRK whole cell lysate: sc-364197.

## 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.

## SELECT PRODUCT CITATIONS

1. Fan, Z., et al. 2003. Tumor suppressor nm23-H1 is a granzyme A-activated DNase during CTL-mediated apoptosis, and the nucleosome assembly protein SET is its inhibitor. *Cell* 112: 659-672.
2. Hippe, H.J., et al. 2009. The interaction of nucleoside diphosphate kinase B with G<sub>βγ</sub> dimers controls heterotrimeric G protein function. *Proc. Natl. Acad. Sci. USA* 106: 16269-16274.
3. Hippe, H.J., et al. 2011. Nucleoside diphosphate kinase B is required for the formation of heterotrimeric G protein containing caveolae. *Naunyn Schmiedebergs Arch. Pharmacol.* 384: 461-472.

## RESEARCH USE

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


 MONOS  
Satisfation  
Guaranteed

Try **nm23-H2 (X-42): sc-100400**, our highly recommended monoclonal alternative to nm23-H2 (L-16).