

nm23-H1/2 (56): sc-136141

BACKGROUND

The nm23 gene, a potential suppressor of metastasis, was originally identified by differential hybridization between two murine melanoma sublines, one with a high and the second with a low metastatic capacity. Highly metastatic sublines 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; Nme1/Nme2 (mouse) mapping to 11 D.

SOURCE

nm23-H1/2 (56) is a mouse monoclonal antibody raised against amino acids 44-152 of nm23-H1 of human origin.

PRODUCT

Each vial contains 50 µg IgG_{2b} in 0.5 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

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 for detailed protocols and support products.

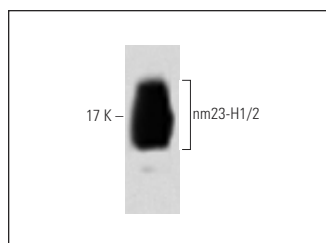
APPLICATIONS

nm23-H1/2 (56) is recommended for detection of nm23-H1 and nm23-H2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500); not recommended for immunoprecipitation.

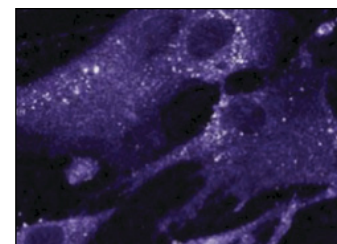
Molecular Weight of nm23-H1/2: 23/17 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200 or HISM cell lysate: sc-2229.

DATA



nm23-H1/2 (56): sc-136141. Western blot analysis of nm23-H1 expression in HeLa whole cell lysate.



nm23-H1/2 (56): sc-136141. Immunofluorescence staining of human intestinal smooth muscle cells showing cytoplasmic staining.

SELECT PRODUCT CITATIONS

1. Tso, P.H., et al. 2013. RGS19 inhibits Ras signaling through nm23-H1/2-mediated phosphorylation of the kinase suppressor of Ras. *Cell. Signal.* 25: 1064-1074.
2. Fuhs, S.R., et al. 2015. Monoclonal 1- and 3-phosphohistidine antibodies: new tools to study histidine phosphorylation. *Cell* 162: 198-210.

RESEARCH USE

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