SANTA CRUZ BIOTECHNOLOGY, INC.

nm23-H1 (37.6): sc-56928

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 isotypes 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 promotor.

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.

CHROMOSOMAL LOCATION

Genetic locus: NME1 (human) mapping to 17q21.33.

SOURCE

nm23-H1 (37.6) is a mouse monoclonal antibody raised against full length nm23-H1 of human origin.

PRODUCT

Each vial contains 250 µl culture supernatant containing IgG_{2a} with < 0.1% sodium azide.

APPLICATIONS

nm23-H1 (37.6) is recommended for detection of nm23-H1 of human origin by Western Blotting (starting dilution to be determined by researcher, dilution range), immunoprecipitation [1-2 µl per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution to be determined by researcher, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution to be determined by researcher, dilution range 1:50-1:500) and solid phase ELISA (starting dilution to be determined by researcher, dilution range 1:10-1:200).

Suitable for use as control antibody for nm23-H1 siRNA (h): sc-29414, nm23-H1 shRNA Plasmid (h): sc-29414-SH and nm23-H1 shRNA (h) Lentiviral Particles: sc-29414-V.

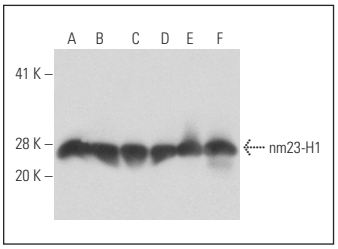
Molecular Weight of nm23-H1: 23 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, HeLa whole cell lysate: sc-2200 or A-431 whole cell lysate: sc-2201.

STORAGE

For immediate and continuous use, store at 4° C for up to one month. For sporadic use, freeze in working aliquots in order to avoid repeated freeze/thaw cycles. If turbidity is evident upon prolonged storage, clarify solution by centrifugation.

DATA



nm23-H1 (37.6): sc-56928. Western blot analysis of nm23-H1 expression in HeLa (**A**), A-431 (**B**), Jurkat (**C**), K-562 (**D**), BJAB (**E**) and PC-3 (**F**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Jin, L., et al. 2009. Nm23-H1 regulates the proliferation and differentiation of the human chronic myeloid leukemia K562 cell line: a functional proteomics study. Life Sci. 84: 458-467.
2. Wan, X.B., et al. 2012. Molecular prognostic prediction for locally advanced nasopharyngeal carcinoma by support vector machine integrated approach. PLoS ONE 7: e31989.
3. Marioni, G., et al. 2012. Nm23-H1 nuclear expression is associated with a more favourable prognosis in laryngeal carcinoma: univariate and multivariate analysis. Histopathology 61: 1057-1064.
4. Tso, P.H., et al. 2013. RGS19 inhibits Ras signaling through nm23H1/2-mediated phosphorylation of the kinase suppressor of Ras. Cell. Signal. 25: 1064-1074.
5. Lionello, M., et al. 2013. A high nuclear nm23-H1 expression is associated with a better prognosis in elderly patients with laryngeal carcinoma. Acta Otolaryngol. 133: 874-880.
6. Lionello, M., et al. 2013. A prognostic role for nm23-H1 in laryngeal carcinoma treated with postoperative radiotherapy: an introductory investigation. Eur. Arch. Otorhinolaryngol. 270: 197-203.
7. Tong, Y., et al. 2015. Metastasis suppressors nm23H1 and nm23H2 differentially regulate neoplastic transformation and tumorigenesis. Cancer Lett. 361: 207-217.

RESEARCH USE

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

PROTOCOLS

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