

nm23-H1/2/3 (FL-152): sc-28829

BACKGROUND

The nm23 protein is implicated in a variety of biological processes, including suppressing metastasis, phytochrome responses in plants and regulating differentiation. nm23-H1, nm23-H2 and nm23-H3, members of the nm23 family, are putative metastasis suppressor genes that encode nucleoside diphosphate kinase (NDPK) A and B. NDPKs form oligomers, which are distributed in both the soluble and particulate fractions of cells. Upon cAMP-induced differentiation of rat cells, nm23 proteins show a differential interaction with intermediate filaments. Both isoforms also associate with GFAP in differentiated cells. nm23 proteins and their mutants are localized predominantly in the mitochondria. nm23 mutants are unable to inhibit differentiation and promote apoptosis as a result of defective protein-protein interactions in the mitochondria. nm23-H1, nm23-H2 and nm23-H3 are indicators of a poor prognosis in human hematopoietic malignancies, and as a high expression of nm23-H1 and -H2 is positively correlated with histological differentiation.

REFERENCES

1. Watanabe, J., et al. 1995. Expression of nm23-H1 and nm23-H2 protein in endometrial carcinoma. *Br. J. Cancer* 72: 1469-1473.
2. Hamby, C.V., et al. 2000. Expression of a catalytically inactive H118Y mutant of nm23-H2 suppresses the metastatic potential of line IV C1 human melanoma cells. *Int. J. Cancer* 88: 547-553.
3. Venturelli, D., et al. 2000. The nucleoside diphosphate kinase activity of DRnm23 is not required for inhibition of differentiation and induction of apoptosis in 32Dc13 myeloid precursor cells. *Exp. Cell Res.* 257: 265-271.
4. Roymans, D., et al. 2000. Nucleoside diphosphate kinase β (nm23-R1/NDPK β) is associated with intermediate filaments and become upregulated upon cAMP-induced differentiation of rat C6 glioma. *Exp. Cell Res.* 261: 127-138.

SOURCE

nm23-H1/2/3 (FL-152) is a rabbit polyclonal antibody raised against amino acids 1-152 representing full length nm23-H1 of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 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.

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.

APPLICATIONS

nm23-H1/2/3 (FL-152) is recommended for detection of nm23-H1, nm23-H2, nm23-H3 and, to a lesser extent, nm23-H4 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); not recommended for IP.

Molecular Weight of nm23-H1: 23 kDa.

Molecular Weight of nm23-H2: 17 kDa.

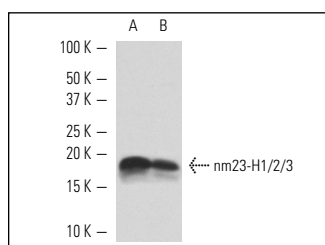
Molecular Weight of nm23-H3: 19 kDa.

Positive Controls: BJAB whole cell lysate: sc-2207 or A-431 whole cell lysate: sc-2201.

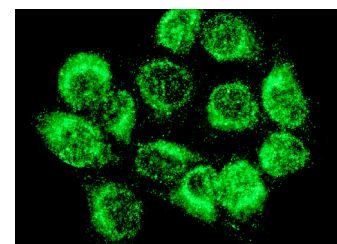
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-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) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



nm23-H1/2/3 (FL-152): sc-28829. Western blot analysis of nm23-H1, nm23-H2 and nm23-H3 expression in BJAB (A) and A-431 (B) whole cell lysates.



nm23-H1/2/3 (FL-152): sc-28829. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic and nuclear localization.

SELECT PRODUCT CITATIONS

1. Severino, V., et al. 2010. Proteomic analysis of human U937 cell line activation mediated by Haemophilus influenzae type b P2 porin and its surface-exposed loop 7. *J. Proteome Res.* 9: 1050-1062.

MONOS
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Try **nm23-H1/2/3 (E-11): sc-166937**, our highly recommended monoclonal alternative to nm23-H1/2/3 (FL-152).