Technical Data Sheet

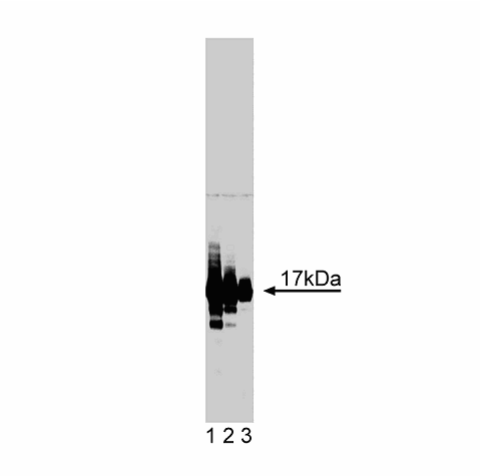
Purified Mouse Anti-Nm23

Product Information

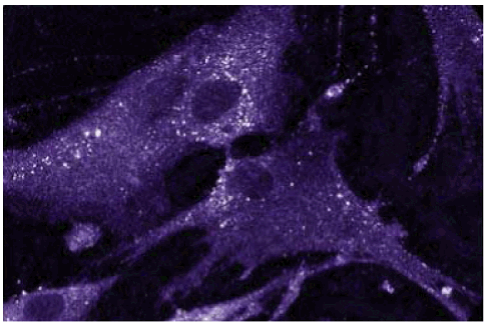
Material Number:	**610248**
Size:	150 µg
Concentration:	250 µg/ml
Clone:	56/Nm23
Immunogen:	Human Nm23 aa. 44-152
Isotype:	Mouse IgG2b
Reactivity:	QC Testing: Human Tested in Development: Mouse, Rat, Chicken
Target MW:	17 kDa
Storage Buffer:	Aqueous buffered solution containing BSA, glycerol, and ≤0.09% sodium azide.

Description

Nm23 is a potential metastasis suppressor protein whose expression is either reduced, altered (by mutation), or amplified in various types of metastatic carcinomas. Two human gene homologues, *nm23-H1* and *nm23-H2*, encode 17 kDa proteins that are 90% identical. Nm23 proteins possess a nucleoside diphosphate kinase (NDPK) activity. This enzymatic activity catalyzes the synthesis of non-adenine-containing nucleoside triphosphates from nucleoside diphosphates via a phosphorylated enzyme intermediate. In addition, Nm23 inhibits differentiation, interacts with GTP-binding (GAP) proteins, autophosphorylates serine residues, and binds to DNA. The biochemical mechanisms by which Nm23 affects tumor metastatic potential have yet to be determined. In murine melanoma cell lines, serine 44 is the major site of autophosphorylation on Nm23-1. This acid-stable phosphorylation of Nm23 is inhibited in vitro by cAMP and in vivo by forskolin. These data indicate that this serine phosphorylation is regulated via some cAMP-dependent event in signal transduction. In addition, it has been shown that the Nm23-H2 protein is identical to the *c-myc* transcription factor PuF. This suggests that some of the cellular effects of Nm23 are mediated by its transcriptional regulatory function, while others are mediated by its NDPK activity.



Western blot analysis of Nm23 on a HeLa cell lysate (Human cervical epitheloid carcinoma; ATCC CCL-2). *Lane 1: 1:5000, lane 2: 1:10,000, lane 3: 1:20,000 dilution of the mouse anti-Nm23 antibody.*



Immunofluorescence staining of human intestinal smooth muscle cells (HISM).

Preparation and Storage

Store undiluted at -20°C.

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

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Application Notes

Application

Western blot	Routinely Tested
Immunofluorescence	Tested During Development
Immunoprecipitation	Not Recommended
Immunohistochemistry	Not Recommended

Recommended Assay Procedure:

Western blot: Please refer to http://www.bdbiosciences.com/pharmingen/protocols/Western_Blotting.shtml

Suggested Companion Products

Catalog Number	Name	Size	Clone
611449	HeLa Cell Lysate	500 µg	(none)
554002	HRP Goat Anti-Mouse Ig	1.0 ml	(none)
554001	FITC Goat Anti-Mouse Ig	0.5 mg	Polyclonal

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
4. Source of all serum proteins is from USDA inspected abattoirs located in the United States.

References

MacDonald NJ, De la Rosa A, Benedict MA, Freije JM, Krutsch H, Steeg PS. A serine phosphorylation of Nm23, and not its nucleoside diphosphate kinase activity, correlates with suppression of tumor metastatic potential. *J Biol Chem.* 1993; 268(34):25780-25789.(Biology)

Postel EH, Ferrone CA. Nucleoside diphosphate kinase enzyme activity of NM23-H2/PuF is not required for its DNA binding and in vitro transcriptional functions. *J Biol Chem.* 1994; 269(12):8627-8630.(Biology)

Rosengard AM, Krutzsch HC, Shearn A. Reduced Nm23/Awd protein in tumour metastasis and aberrant Drosophila development. *Nature.* 1989; 342(6246):177-180.(Biology)