

## Nucleophosmin Mouse mAb

CatalogNo: YM0056

### Key Features

#### Host Species

- Mouse

#### Reactivity

- Human, Monkey

#### Applications

- WB, IHC, IF, ELISA

#### MW

- 33kD (Calculated)

### Recommended Dilution Ratios

**WB 1:500-1:2000**

**IHC 1:200-1:1000**

**IF 1:200-1:1000**

**ELISA 1:10000**

**Not yet tested in other applications.**

### Storage

**Storage\*** -15°C to -25°C/1 year (Do not lower than -25°C)

**Formulation** Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.

### Basic Information

**Clonality** Monoclonal

**Clone Number** 1D4

### Immunogen Information

**Immunogen** Purified recombinant fragment of human B23 expressed in E. Coli.

**Specificity** B23 Monoclonal Antibody detects endogenous levels of B23 protein.

## | Target Information

**Gene name** NPM1 NPM

**Protein Name** Nucleophosmin

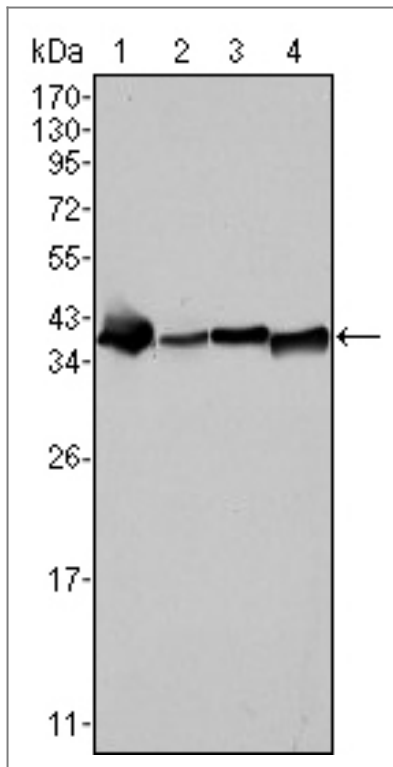
| Organism | Gene ID                | UniProt ID               |
|----------|------------------------|--------------------------|
| Human    | <a href="#">4869</a> ; | <a href="#">P06748</a> ; |

**Cellular Localization** Nucleus, nucleolus . Nucleus, nucleoplasm . Cytoplasm, cytoskeleton, microtubule organizing center, centrosome . Generally nucleolar, but is translocated to the nucleoplasm in case of serum starvation or treatment with anticancer drugs. Has been found in the cytoplasm in patients with primary acute myelogenous leukemia (AML), but not with secondary AML. Can shuttle between cytoplasm and nucleus. Co- localizes with the methylated form of RPS10 in the granular component (GC) region of the nucleolus. Colocalized with nucleolin and APEX1 in nucleoli. Isoform 1 of NEK2 is required for its localization to the centrosome during mitosis.

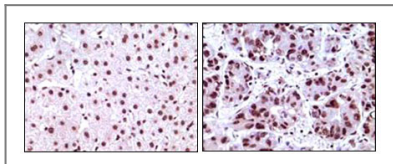
**Tissue specificity** Amnion,B-cell lymphoma,Bone marrow,Brain,Cervix carcinoma,Colon carcinoma,Epithelium,Kidney

**Function** Disease:A chromosomal aberration involving NPM1 is a cause of myelodysplastic syndrome (MDS). Translocation t(3;5)(q25.1;q34) with MLL1.,Disease:A chromosomal aberration involving NPM1 is found in a form of acute promyelocytic leukemia. Translocation t(5;17)(q32;q11) with RARA.,Disease:A chromosomal aberration involving NPM1 is found in a form of non-Hodgkin lymphoma. Translocation t(2;5)(p23;q35) with ALK. The resulting chimeric NPM1-ALK protein homodimerize and the kinase becomes constitutively activated.,Disease:Defects in NPM1 are associated with acute myelogenous leukemia (AML). Mutations in exon 12 affecting the C-terminus of the protein are associated with an aberrant cytoplasmic location.,Function:Involved in diverse cellular processes such as ribosome biogenesis, centrosome duplication, protein chaperoning, histone assembly, cell proliferation, and regulation of tumor suppressors TP53/p53 and ARF. Binds ribosome presumably to drive ribosome nuclear export. Associated with nucleolar ribonucleoprotein structures and bind single-stranded nucleic acids. Acts as a chaperonin for the core histones H3, H2B and H4.,PTM:Acetylated at C-terminal lysine residues, thereby increasing affinity to histones.,PTM:ADP-ribosylated.,PTM:Phosphorylated at Ser-4 by PLK1. Phosphorylated by CDK2 at Ser-125 and Thr-199. Phosphorylation at Thr-199 may trigger initiation of centrosome duplication. Phosphorylated by CDC2 at Thr-199, Thr-219, Thr-234 and Thr-237 during cell mitosis. When these four sites are phosphorylated, RNA-binding activity seem to be abolished. May be phosphorylated at Ser-70 by NEK2.,PTM:Sumoylated by ARF.,similarity:Belongs to the nucleoplasmin family.,subcellular location:Generally nucleolar, but is translocated to the nucleoplasm in case of serum starvation or treatment with anticancer drugs. Has been found in the cytoplasm in patients with primary acute myelogenous leukemia (AML), but not with secondary AML. Can shuttle between cytoplasm and nucleus.,subunit:Decamer formed by two pentameric rings associated in a head-to-head fashion. Disulfide-linked dimers under certain conditions. The SWAP complex consists of NPM1, NCL, PARP1 and SWAP70 (By similarity). Interacts with NSUN2. Interacts with hepatitis delta virus S-HDAg.,

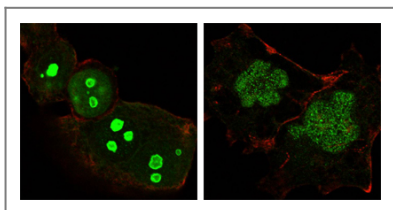
## | Validation Data



Western Blot analysis using B23 Monoclonal Antibody against SMMC-7721 (1), HepG2 (2), HeLa (3) and HEK293 (4) cell lysate.



Immunohistochemistry analysis of paraffin-embedded human liver carcinoma tissues, showing nuclear localization with DAB staining using B23 Monoclonal Antibody.



Confocal immunofluorescence analysis of HeLa (left) and NTERA-2 (right) cells using B23 Monoclonal Antibody (green). Red: Actin filaments have been labeled with DY-554 phalloidin.

## Contact information

Orders: [order@immunoway.com](mailto:order@immunoway.com)  
 Support: [tech@immunoway.com](mailto:tech@immunoway.com)  
 Telephone: 877-594-3616 (Toll Free), 408-747-0185  
 Website: <http://www.immunoway.com>  
 Address: 2200 Ringwood Ave San Jose, CA 95131 USA



Please scan the QR code to access additional product information:  
**Nucleophosmin**  
**Mouse mAb**