

## Basic Information

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|---------------------------|---|--|
| <b>Product Name</b>       | Anti-B23/NPM1 Antibody  |  |
| <b>Gene Name</b>          | NPM1  |  |
| <b>Source</b>             | Rabbit  |  |
| <b>Isotype</b>            | IgG   |  |
| <b>Species Reactivity</b> | human, mouse, rat   |  |
| <b>Tested Application</b> | WB, IHC, IF, ICC/IF, FCM  |  |
| <b>Contents</b>           | 500 ug/ml antibody with PBS , 0.02% NaN3 , 1 mg BSA and 50% glycerol.   |  |
| <b>Immunogen</b>          | E.coli-derived human Nucleophosmin recombinant protein (Position: M1-L294). Human Nucleophosmin shares 95% amino acid (aa) sequence identity with both mouse and rat Nucleophosmin.   |  |
| <b>concentration</b>      | 500 ug/ml   |  |
| <b>Purification</b>       | Immunogen affinity purified.  |  |
| <b>Observed MW</b>        | 39KD  |  |
| <b>Dilution Ratios</b>    | Western blot(WB): 1:500-2000<br>Immunohistochemistry in paraffin section (IHC): 1:50-400<br>Immunofluorescence (IF): 1:50-400<br>Immunocytochemistry/Immunofluorescence (ICC/IF): 1:50-400<br>Flow cytometry (FCM): 1-3 $\mu\text{g}/1 \times 10^6$ cells<br>(Boiling the paraffin sections in 10mM citrate buffer,pH6.0,or PH8.0 EDTA repair liquid for 20 mins is required for the staining of formalin/paraffin sections.) Optimal working dilutions must be determined by end user. |  |

## Storage

12 months from date of receipt, -20°C as supplied. 6 months 2 to 8°C after reconstitution. Avoid repeated freezing and thawing.

## Background Information

NPM1(Nucleophosmin/Nucleoplasmin family, member1), also known as NPM, nucleolar phosphoprotein B23 or numatrin, is a protein that in humans is encoded by the NPM1 gene. The NPM1 gene maps to chromosome 5q35. Chan et al. (1989) found that nucleophosmin is a nucleolar phosphoprotein that is more abundant in tumor cells than in normal resting cells. Stimulation of the growth of normal cells, e.g., mitogen activation of B lymphocytes, was accompanied by an increase in nucleophosmin protein level. They stated that nucleophosmin is likely involved in the assembly of ribosomal proteins into ribosomes. Electron microscopic study indicated that nucleophosmin is concentrated in the granular region of the nucleolus, where ribosome assembly occurs.

## Selected Validation Data

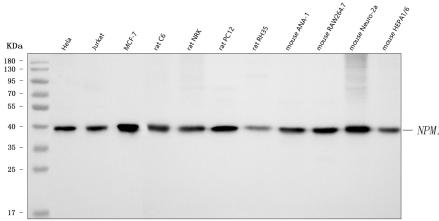


Figure 1. Western blot analysis of anti- NPM1 antibody (PB9341). The sample well of each lane was loaded with 50ug of sample under reducing conditions.

Lane 1: human Hela whole cell lysates,  
Lane 2: human Jurkat whole cell lysates,  
Lane 3: human MCF7 whole cell lysates,  
Lane 4: rat C6 whole cell lysates,  
Lane 5: rat NRK whole cell lysates,  
Lane 6: rat PC-12 whole cell lysates,  
Lane 7: rat RH35 whole cell lysates,  
Lane 8: mouse ANA-1 whole cell lysates,  
Lane 9: mouse RAW264.7 whole cell lysates,  
Lane 10: mouse Neuro-2a whole cell lysates,  
Lane 11: mouse Hepa1-6 whole cell lysates.

Use rabbit anti- NPM1 1:1000, probed with a goat anti-rabbit IgG-HRP secondary antibody. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002). A specific band was detected for NPM1 at approximately 39KD. The expected band size for NPM1 is at 33KD.

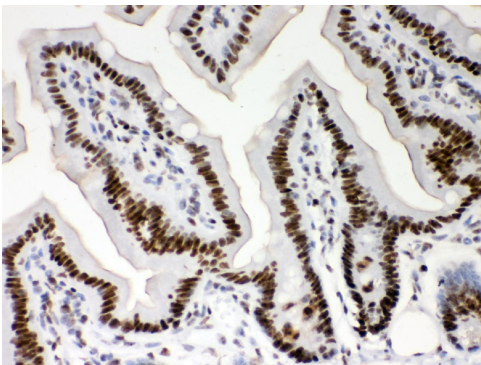


Figure 2. IHC analysis using anti- NPM1 antibody (PB9341). detected in paraffin-embedded section of mouse intestine tissue. Peroxidase Conjugated goat anti-rabbit IgG was used as secondary antibody. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.

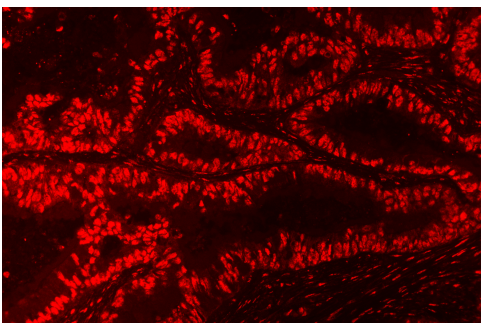


Figure 5. IF analysis using anti- NPM1 antibody (PB9341). detected in paraffin-embedded section of human intestinal cancer tissue. The tissue section were stained using the Dylight550-conjugated Anti-rabbit IgG Secondary Antibody (red)(Catalog # BA1135) and counterstained with DAPI (blue).

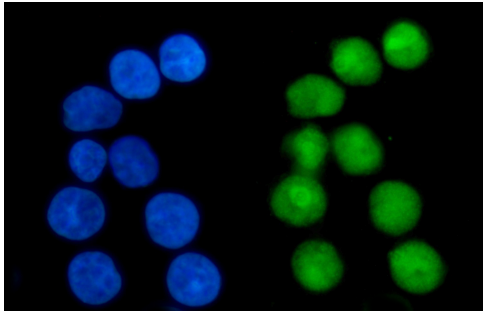


Figure 6. ICC analysis using anti- NPM1 antibody (PB9341). was detected in immersion fixed CACO-2 cell line. Cells were stained using the DyLight488-conjugated Anti-rabbit IgG Secondary Antibody (green)(Catalog#BA1127) and counterstained with DAPI (blue).

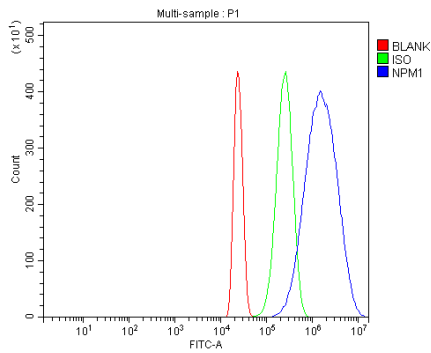


Figure 7. Flow cytometry analysis of HL-60 cell ( $1 \times 10^6$ ) DyLight 488 conjugated goat anti- rabbit IgG(blue) was used as secondary antibody. Isotype control antibody (Green line) was rabbit IgG DyLight 488. Unlabelled sample (Red line).