Human NPM1 antibody

Catalog Number: ATGA0345

PRODUCT INFORMATION

Catalog number
ATGA0345

Clone No.
AT23F1

Product type
Monoclonal Antibody

UnitProt No.
P06748

NCBI Accession No.
NP_002511

Alternative Names
Nucleophosmin, B23, NPM

PRODUCT SPECIFICATION

Antibody Host
Mouse

Reacts With
Human

Concentration
1mg/ml (determined by BCA assay)

Formulation
Liquid in. Phosphate-Buffered Saline (pH 7.4) with 0.02% Sodium Azide, 10% glycerol

Immunogen
Recombinant human NPM1(1-294aa) purified from E. coli

Isotype
IgG1 kappa

Purification Note
By protein-A affinity chromatography

Application
ELISA,WB,ICC/IF,FACS

Usage
The antibody has been tested by ELISA, Western blot, ICC/IF and FACS analysis to assure specificity and reactivity. Since application varies, however, each investigation should be titrated by the reagent to obtain optimal results.

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Storage

Can be stored at +2C to +8C for 1 week. For long term storage, aliquot and store at -20C to -80C. Avoid repeated freezing and thawing cycles.

BACKGROUND

Description

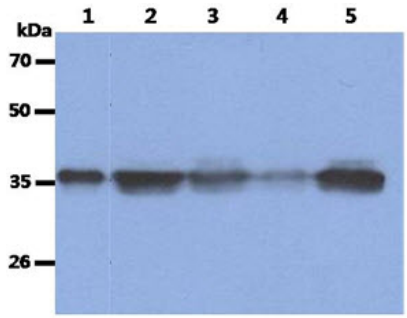
NPM1 is associated with nucleolar ribonucleoprotein structures and bind single-stranded and double-stranded nucleic acids, but it binds preferentially G-Quadruplex forming nucleic acids. It is involved in the biogenesis of ribosomes and may assist small basic proteins in their transport to the nucleolus. Its regulation through SUMOylation (by SENP3 and SENP5) is another facet of the proteins's regulation and cellular functions. It is located in the nucleolus, but it can be translocated to the nucleoplasm in case of serum starvation or treatment with anticancer drugs. The protein is phosphorylated. Chromosomal aberrations involving NPM1 were found in patients with non-Hodgkin lymphoma, acute promyelocytic leukemia, myelodysplastic syndrome, and acute myelogenous leukemia. It has been found in the cytoplasm in patients with primary acute myelogenous leukemia.

General References

Maiguel D.A., et al.(2004) Mol cell Biol. 24: 3703-3711.
Colombo E., et al. (2005) Mol cell Biol. 25: 8874-8886.

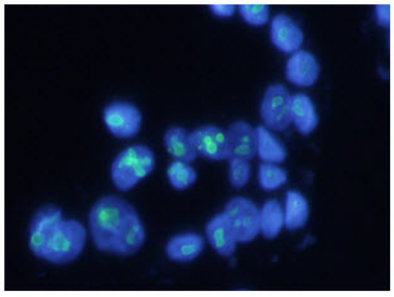
DATA

Western blot analysis (WB)



The recombinant protein (50ng), cell lysates(40ug) were resolved by SDS-PAGE, transferred to PVDF membrane and probed with anti-human NPM1 antibody (1:1000). Proteins were visualized using a goat anti-mouse secondary antibody conjugated to HRP and an ECL detection system.
Lane 1.: Recombinant human NPM1 protein
Lane 2.: Jurkat cell lysate
Lane 3.: 293T cell lysate
Lane 4.: HeLa cell lysate
Lane 5.: HepG2 cell lysate

Immunocytochemistry/Immunofluorescence (ICC/IF)



ICC/IF analysis of NPM1 in WiDr cells. The cell was stained with ATGA0345 (1:200). The secondary antibody (green) was used Alexa Fluor 488. DAPI was stained the cell nucleus (blue).

Flow cytometry (FACS)

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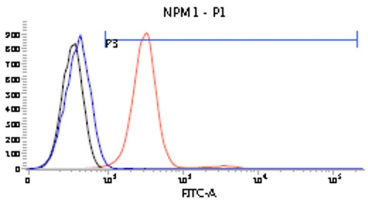

Flow cytometry analysis of NPM1 in WiDr cells. The cell was stained with ATGA0345 at 2-5ug for 1x10^6cells (red). A Goat anti mouse IgG (Alexa fluor 488) was used as the secondary antibody. Mouse monoclonal IgG was used as the isotype control (blue), cells without incubation with primary and secondary antibody was used as the negative control (light gray).