
Product Name: Nucleophosmin Rabbit Polyclonal Antibody**Catalog #: APRab14957**

For research use only.

Summary

Description	Rabbit polyclonal Antibody
Host	Rabbit
Application	WB,IHC,ICC/IF,ELISA
Reactivity	Human,Mouse,Rat,Monkey
Conjugation	Unconjugated
Modification	Unmodified
Isotype	IgG
Clonality	Polyclonal
Form	Liquid
Concentration	1mg/ml
Storage	Aliquot and store at -20°C (valid for 12 months). Avoid freeze/thaw cycles.
Shipping	Ice bags
Buffer	Liquid in PBS containing 50% glycerol, 0.5% protective protein and 0.02% New type preservative N.
Purification	Affinity purification

Application

Dilution Ratio	WB 1:500-1:2000,IHC 1:100-1:300,ICC/IF 1:50-1:200,ELISA 1:5000-1:20000
Molecular Weight	37kDa

Antigen Information

Gene Name	NPM1
Alternative Names	NPM1; NPM; Nucleophosmin; NPM; Nucleolar phosphoprotein B23; Nucleolar protein NO38; Numatrin
Gene ID	4869.0
SwissProt ID	P06748
Immunogen	The antiserum was produced against synthesized peptide derived from human NPM. AA range:1-50

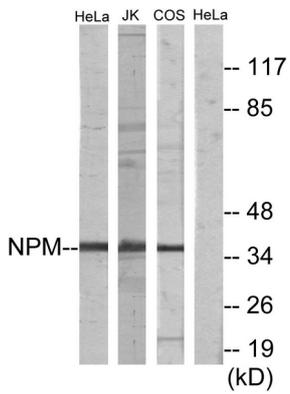
Background

This gene encodes a phosphoprotein which moves between the nucleus and the cytoplasm. The gene product is thought to be involved in several processes including regulation of the ARF/p53 pathway. A number of genes are fusion partners have been characterized, in particular the anaplastic lymphoma kinase gene on chromosome 2. Mutations in this gene are associated with acute myeloid leukemia. More than a dozen pseudogenes of this gene have been identified. Alternative splicing results in multiple transcript variants.[provided by RefSeq, Nov 2009],disease:A chromosomal aberration involving NPM1 is a cause of myelodysplastic syndrome (MDS). Translocation t(3;5)(q25.1;q34) with MLF1.,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.,

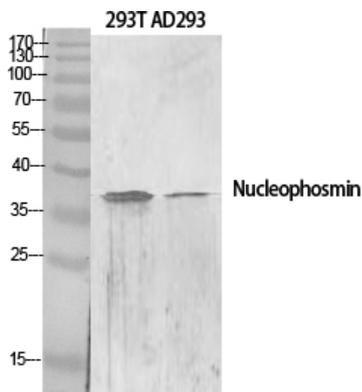
Research Area

Epigenetics and Nuclear Signaling

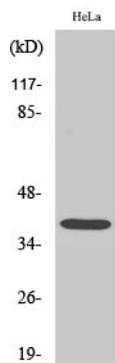
Image Data



Western blot analysis of lysates from HeLa, Jurkat, and COS7 cells, using NPM Antibody. The lane on the right is blocked with the synthesized peptide.



Western Blot analysis of various cells using Nucleophosmin Polyclonal Antibody diluted at 1: 2000



Western Blot analysis of COS7 cells using Nucleophosmin Polyclonal Antibody diluted at 1: 2000