Nucleophosmin (Phospho Thr234) Rabbit pAb

CatalogNo: YP0386 **Orthogonal Validated**

Key Features

Host Species
- Rabbit

Reactivity
- Human,Mouse,Rat

Applications
- WB,IHC,IF,ELISA

MW
- 38kD (Observed)

Isotype
- IgG

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.

Recommended Dilution Ratios

WB 1:500-1:2000
IHC 1:100-1:300
ELISA 1:10000
IF 1:50-200

Basic Information

Clonality	Polyclonal

Immunogen Information

Immunogen	The antiserum was produced against synthesized peptide derived from human NPM around the phosphorylation site of Thr234. AA range:201-250

Specificity	Phospho-B23 (T234) Polyclonal Antibody detects endogenous levels of B23 protein only when phosphorylated at T234.The name of modified sites may be influenced by many factors, such as species (the modified site was not originally found in human samples) and the change of protein sequence (the previous protein sequence is incomplete, and the protein sequence may be prolonged with the development of protein sequencing technology). When naming, we will use the "numbers" in historical reference to keep the sites consistent with the reports. The antibody binds to the following modification sequence (lowercase letters are modification sites):EKtPK

Target Information

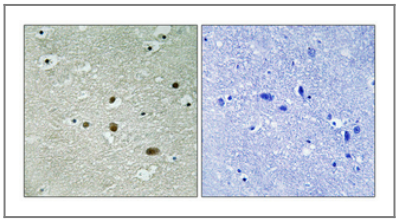
Gene name	NPM1 NPM
Protein Name	Nucleophosmin

Organism	Gene ID	UniProt ID
Human	4869;	P06748;
Mouse	18148;	Q61937;
Rat	25498;	P13084;

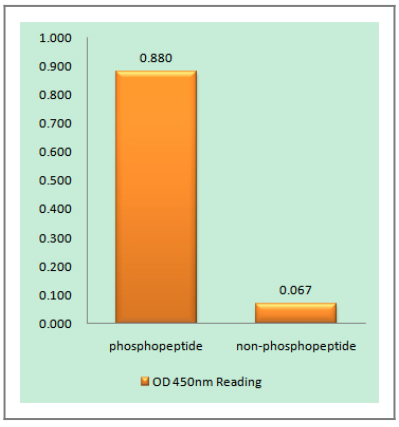
Cellular Localization	Nucleus , nucleolus . Nucleus , nucleoplasm . Cytoplasm , cytoskeleton , microtubule organizing center , centrosome . Generally nucleolar , but is translocated to the nucleoplasm in case of serum starvation or treatment with anticancer drugs. Has been found in the cytoplasm in patients 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 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 phosphorated , RNA-binding activity seem to be abolished. May be phosphoryled 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. ,

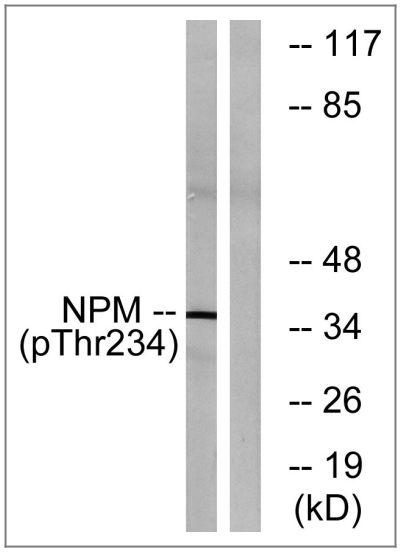
Validation Data



Immunohistochemical analysis of paraffin-embedded Human brain. Antibody was diluted at 1:100 (4℃ overnight). High-pressure and temperature Tris-EDTA,pH8.0 was used for antigen retrieval. Negetive contrl (right) obtaned from antibody was pre-absorbed by immunogen peptide.



Enzyme-Linked Immunosorbent Assay (Phospho-ELISA) for Immunogen Phosphopeptide (Phospho-left) and Non-Phosphopeptide (Phospho-right), using NPM (Phospho-Thr234) Antibody



Western blot analysis of lysates from HeLa cells treated with nocodazole 1ug/ml 18h, using NPM (Phospho-Thr234) Antibody. The lane on the right is blocked with the phospho peptide.

Contact information

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