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Nucleophosmin Rabbit mAb

Catalog # AP75827

Product Information

Application	WB, IHC-P, FC
Primary Accession	P06748
Reactivity	Rat, Human, Mouse
Host	Rabbit
Clonality	Monoclonal Antibody
Isotype	IgG
Conjugate	Unconjugated
Purification	Affinity Purified
Calculated MW	32575

Additional Information

Gene ID	4869
Other Names	NPM1
Dilution	WB~~1:1000-1:5000 IHC-P~~N/A FC~~1:20-1:50
Format	Liquid in 50mM Tris-Glycine(pH 7.4), 0.15M NaCl, 40%Glycerol, 0.01% sodium azide and 0.05% BSA.
Storage	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.

Protein Information

Name	NPM1 (HGNC:7910)
Synonyms	NPM
Function	Involved in diverse cellular processes such as ribosome biogenesis, centrosome duplication, protein chaperoning, histone assembly, cell proliferation, and regulation of tumor suppressors p53/TP53 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. Stimulates APEX1 endonuclease activity on apurinic/apyrimidinic (AP) double-stranded DNA but inhibits APEX1 endonuclease activity on AP single-stranded RNA. May exert a control of APEX1 endonuclease activity within nucleoli devoted to repair AP on rDNA and the removal of oxidized rRNA molecules. In concert with BRCA2, regulates centrosome duplication. Regulates centriole duplication: phosphorylation by PLK2 is able to trigger centriole replication. Negatively regulates the activation of EIF2AK2/PKR and suppresses apoptosis through

inhibition of EIF2AK2/PKR autophosphorylation. Antagonizes the inhibitory effect of ATF5 on cell proliferation and relieves ATF5-induced G2/M blockade (PubMed:22528486). In complex with MYC enhances the transcription of MYC target genes (PubMed:25956029). May act as chaperonin or cotransporter in the nucleolar localization of transcription termination factor TTF1 (By similarity).

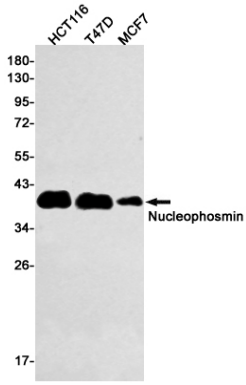
Cellular Location

Nucleus, nucleolus. Nucleus, nucleoplasm. Cytoplasm, cytoskeleton, microtubule organizing center, centrosome. Note=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. 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. Can shuttle between cytoplasm and nucleus (PubMed:38231884).

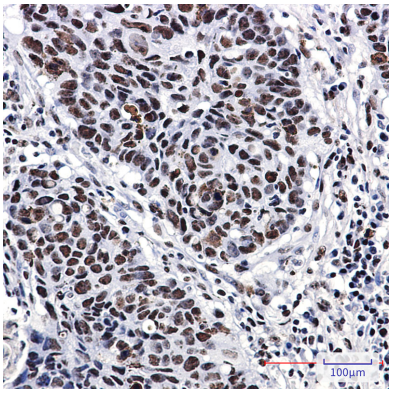
Background

Nucleophosmin (NPM), also named B23 or NO38, is a major nucleolar protein which is 20 times more abundant in tumor or proliferating cells than in normal resting cells. NPM has been implicated in several distinct cellular functions, including assembly and transport of ribosomes, cytoplasmic/nuclear trafficking, regulation of DNA polymerase alpha activity, centrosome duplication and molecular chaperoning activities. The NPM is also known for its fusion with the anaplastic lymphoma kinase (ALK) receptor tyrosine kinase. The NPM portion contributes to transformation by providing a dimerization domain, which results in activation of the fused kinase.

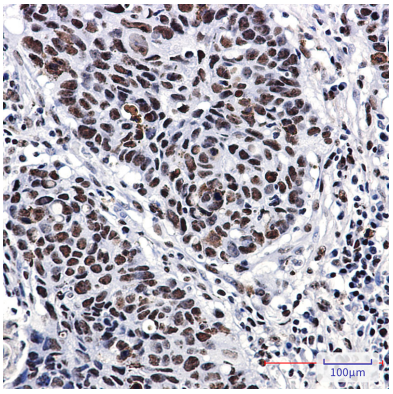
Images

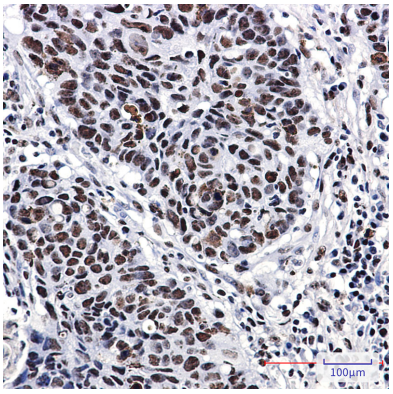


Western blot analysis of Nucleophosmin in HCT116, T47D, MCF-7 lysates using Nucleophosmin antibody.



Immunohistochemistry analysis of paraffin-embedded Human lung cancer using Nucleophosmin antibody.High-pressure and temperature Sodium Citrate pH 6.0 was used for antigen retrieval.





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