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NPM1 Antibody (N-term) Blocking Peptide

Synthetic peptide
Catalog # BP2834a

Specification

NPM1 Antibody (N-term) Blocking Peptide - Product Information

Primary Accession	P06748

NPM1 Antibody (N-term) Blocking Peptide - Additional Information

Gene ID 4869

Other Names
Nucleophosmin, NPM, Nucleolar phosphoprotein B23, Nucleolar protein NO38, Numatrin, NPM1, NPM

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP2834a was selected from the N-term region of human NPM1. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

NPM1 Antibody (N-term) Blocking Peptide - Protein Information

Name NPM1

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. 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

NPM1 Antibody (N-term) Blocking Peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Blocking Peptides

NPM1 Antibody (N-term) Blocking Peptide - Images

NPM1 Antibody (N-term) Blocking Peptide - Background

NPM1 is a ubiquitously expressed nucleolar protein that shuttles between the nucleus and cytoplasm. It is implicated in multiple functions, including ribosomal protein assembly and transport, control of centrosome duplication, and regulation of the tumor suppressor ARF. NPM1 mutations that relocalize NPM1 from the nucleus into the cytoplasm are associated with development of acute myeloid leukemia.

NPM1 Antibody (N-term) Blocking Peptide - References

Vascotto,C., Mol. Cell. Biol. 29 (7), 1834-1854 (2009)Ma,W., Cancer Biomark 5 (1), 51-58 (2009)Zhang,H., J. Biol. Chem. 279 (34), 35726-35734 (2004)