

Goat Anti-Nucleophosmin / NPM1 Antibody
Peptide-affinity purified goat antibody
Catalog # AF1747a

Specification

Goat Anti-Nucleophosmin / NPM1 Antibody - Product Information

Application	WB
Primary Accession	P06748
Other Accession	NP_954654 , 4869
Reactivity	Human, Mouse, Rat
Predicted	Dog
Host	Goat
Clonality	Polyclonal
Concentration	100ug/200ul
Isotype	IgG
Calculated MW	32575

Goat Anti-Nucleophosmin / NPM1 Antibody - Additional Information

Gene ID 4869

Other Names

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

Format

0.5 mg IgG/ml in Tris saline (20mM Tris pH7.3, 150mM NaCl), 0.02% sodium azide, with 0.5% bovine serum albumin

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

Goat Anti-Nucleophosmin / NPM1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Goat Anti-Nucleophosmin / NPM1 Antibody - 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/aprimidinic (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

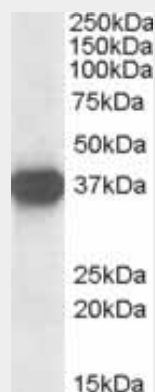
Nucleus, nucleolus. Nucleus, nucleoplasm. Cytoplasm, cytoskeleton, microtubule organizing center, centrosome Note=Generally nucleolar, but is translocated to the nucleoplasm in case of serum starvation or treatment with anticancer drugs. Has been found in the cytoplasm in patients with primary acute 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)

Goat Anti-Nucleophosmin / NPM1 Antibody - Protocols

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

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

Goat Anti-Nucleophosmin / NPM1 Antibody - Images



AF1747a staining (0.1 µg/ml) of Jurkat lysate (RIPA buffer, 35 µg total protein per lane). Primary incubated for 1 hour. Detected by chemiluminescence.

Goat Anti-Nucleophosmin / NPM1 Antibody - 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.

Goat Anti-Nucleophosmin / NPM1 Antibody - References

Incidence and significance of FLT3-ITD and NPM1 mutations in patients with normal karyotype acute myeloid leukaemia. Haslam K, et al. Ir J Med Sci, 2010 Aug 31. PMID 20803351.

Combined mutations of ASXL1, CBL, FLT3, IDH1, IDH2, JAK2, KRAS, NPM1, NRAS, RUNX1, TET2 and WT1 genes in myelodysplastic syndromes and acute myeloid leukemias. Rocquain J, et al. BMC Cancer, 2010 Aug 2. PMID 20678218.

The prognostic significance of IDH1 mutations in younger adult patients with acute myeloid leukemia is dependent on FLT3/ITD status. Green CL, et al. Blood, 2010 Jul 22. PMID 20651067.

Performance and clinical evaluation of a sensitive multiplex assay for the rapid detection of common NPM1 mutations. Hafez M, et al. J Mol Diagn, 2010 Sep. PMID 20616361.

High frequency type I/II mutational shifts between diagnosis and relapse are associated with outcome in pediatric AML: implications for personalized medicine. Bachas C, et al. Blood, 2010 Jun 30. PMID 20592250.