

## Product datasheet

# Anti-Nucleophosmin antibody ab63622

### 2 图像

#### 概述

产品名称	Anti-Nucleophosmin抗体
描述	兔多克隆抗体to Nucleophosmin
宿主	Rabbit
经测试应用	适用于: WB, ICC/IF, ELISA
种属反应性	与反应: Human 预测可用于: Mouse, Rat
免疫原	Synthetic non-phosphopeptide derived from human Nucleophosmin around the phosphorylation site of threonine 199 (R-D-T <sup>P</sup> -P-A).
阳性对照	Jurkat cells. HepG2 cells.

#### 性能

形式	Liquid
存放说明	Shipped at 4°C. Store at -20°C. Stable for 12 months at -20°C.
存储溶液	Preservative: 0.02% Sodium Azide Constituents: 50% Glycerol, PBS (without Mg <sup>2+</sup> and Ca <sup>2+</sup> ), 150mM Sodium chloride, pH 7.4
纯度	Immunogen affinity purified
克隆	多克隆
同种型	IgG

#### 应用

Our [Abpromise guarantee](#) covers the use of **ab63622** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

应用	Ab评论	说明
WB		1/500 - 1/1000. Detects a band of approximately 33 kDa (predicted molecular weight: 33 kDa).
ICC/IF		1/100 - 1/500.

应用	Ab评论	说明
ELISA		1/5000.

## 靶标

### 功能

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).

### 疾病相关

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.

A chromosomal aberration involving NPM1 is found in a form of acute promyelocytic leukemia. Translocation t(5;17)(q32;q11) with RARA.

A chromosomal aberration involving NPM1 is a cause of myelodysplastic syndrome (MDS). Translocation t(3;5)(q25.1;q34) with MLF1.

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.

### 序列相似性

Belongs to the nucleoplasmin family.

### 翻译后修饰

Acetylated at C-terminal lysine residues, thereby increasing affinity to histones.

ADP-ribosylated.

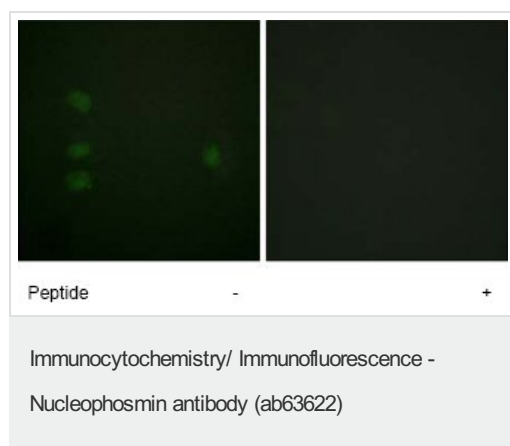
Phosphorylated at Ser-4 by PLK1 and PLK2. Phosphorylation at Ser-4 by PLK2 in S phase is required for centriole duplication and is sufficient to trigger centriole replication. Phosphorylation at Ser-4 by PLK1 takes place during mitosis. Phosphorylated by CDK2 at Ser-125 and Thr-199. Phosphorylation at Thr-199 may trigger initiation of centrosome duplication. Phosphorylated by CDK1 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. The Thr-199 phosphorylated form has higher affinity for ROCK2. CDK6 triggers Thr-199 phosphorylation when complexed to Kaposi's sarcoma herpesvirus (KSHV) V-cyclin, leading to viral reactivation by reducing viral LANA levels.

Sumoylated by ARF.

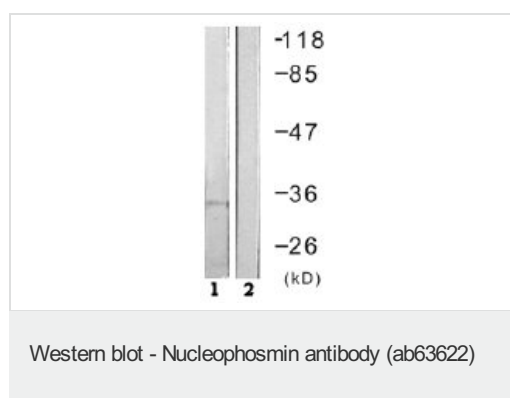
### 细胞定位

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.

## 图片



Immunofluorescence analysis of HepG2 cells, using ab63622 at a dilution of 1/100-1/500. Samples were untreated (left hand panel) or treated (right hand panel) with the immunizing peptide.



**All lanes :** Anti-Nucleophosmin antibody (ab63622) at 1/500 dilution

**Lane 1 :** Extracts from Jurkat cells

**Lane 2 :** Extracts from Jurkat cells with immunizing peptide at 5  $\mu$ g

Lysates/proteins at 10  $\mu$ g per lane.

**Predicted band size:** 33 kDa

**Observed band size:** 33 kDa

**Please note:** All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE"

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