

# Anti-Nucleophosmin antibody [EP1848Y] ab52644

**重组 RabMAb**

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### 概述

<b>产品名称</b>	Anti-Nucleophosmin抗体[EP1848Y]
<b>描述</b>	兔单克隆抗体[EP1848Y] to Nucleophosmin
<b>宿主</b>	Rabbit
<b>特异性</b>	The mouse and rat recommendation is based on the Western Blot results. We do not guarantee Immunohistochemistry for mouse and rat.
<b>经测试应用</b>	<b>适用于:</b> ICC/IF, Flow Cyt (Intra), WB, IHC-P <b>不适用于:</b> IP
<b>种属反应性</b>	<b>与反应:</b> Mouse, Rat, Human
<b>免疫原</b>	Synthetic peptide within Human Nucleophosmin aa 1-100 (N terminal). The exact sequence is proprietary. Database link: <a href="#">P06748</a>
<b>阳性对照</b>	WB: HeLa, MEF, PC-12, 3T3-L1 cell lysates; IHC-P: Human cervical carcinoma tissue; ICC/IF: HeLa cells; Flow Cyt (intra): HeLa cells.
<b>常规说明</b>	This product is a recombinant monoclonal antibody, which offers several advantages including: <ul style="list-style-type: none"> <li>- High batch-to-batch consistency and reproducibility</li> <li>- Improved sensitivity and specificity</li> <li>- Long-term security of supply</li> <li>- Animal-free production</li> </ul> For more information <a href="#">see here</a> . Our RabMAb <sup>®</sup> technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to <a href="#">RabMAb<sup>®</sup> patents</a> .  Mouse, Rat: We have preliminary internal testing data to indicate this antibody may not react with these species. Please contact us for more information.

### 性能

<b>形式</b>	Liquid
<b>存放说明</b>	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C. Avoid freeze / thaw cycle.
<b>存储溶液</b>	pH: 7.2

Preservative: 0.01% Sodium azide  
Constituents: 0.05% BSA, 40% Glycerol (glycerin, glycerine), 59% PBS

纯度 Protein A purified  
克隆 单克隆  
克隆编号 EP1848Y  
同种型 IgG

## 应用

**The Abpromise guarantee** **Abpromise™** 承诺保证使用 ab52644 于以下的经测试应用

“应用说明”部分 下显示的仅为推荐的起始稀释度；实际最佳的稀释度/浓度应由使用者检定。

应用	Ab评论	说明
ICC/IF		1/100.
Flow Cyt (Intra)		1/40. <b>ab172730</b> - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.
WB		1/1000 - 1/500000. Detects a band of approximately 35,38 kDa (predicted molecular weight: 33 kDa).
IHC-P		1/300. Perform heat mediated antigen retrieval before commencing with IHC staining protocol. See <b><u>IHC antigen retrieval protocols.</u></b> <b>For unpurified use at 1/100- 1/250.</b>

应用说明 Is unsuitable for IP.

## 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.

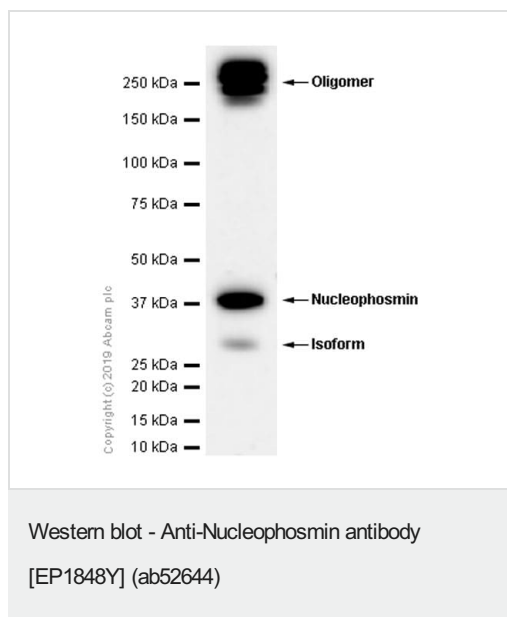
Phosphorylated at Ser-4 by PLK1 and PLK2. Phosphorylation at Ser-4 by PLK2 in S phase is required for centriole duplication and is sufficient to trigger centriole replication. Phosphorylation at Ser-4 by PLK1 takes place during mitosis. Phosphorylated by CDK2 at Ser-125 and Thr-199. Phosphorylation at 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



Anti-Nucleophosmin antibody [EP1848Y] (ab52644) at 1/2000 dilution (Purified) + HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysate at 15  $\mu$ g

### Secondary

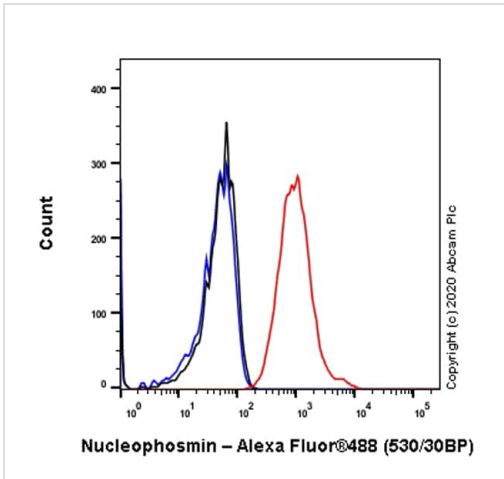
Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) at 1/20000 dilution

**Predicted band size:** 33 kDa

**Observed band size:** 250,27,33 kDa

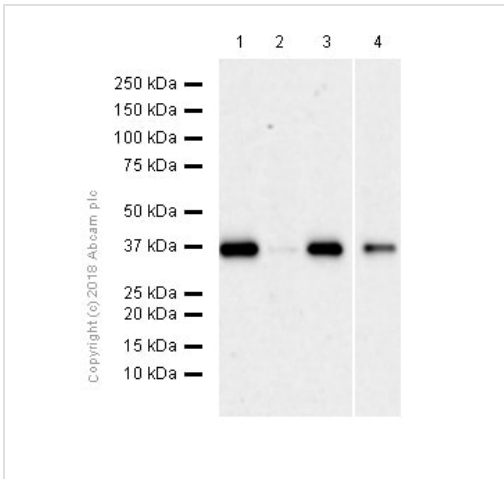
The band at 250kDa might be an oligomer and the band at 33kDa might be an isoform of NPM.

**Blocking/Diluting buffer:** 5% NFDM/TBST



Flow Cytometry (Intracellular) - Anti-Nucleophosmin antibody [EP1848Y] (ab52644)

Intracellular Flow Cytometry analysis of HeLa (Human cervix adenocarcinoma epithelial cell) cells, labeling Nucleophosmin with Purified ab52644 at 1/40 dilution (10µg/mL) (Red). Cells were fixed with 4% Paraformaldehyde and permeabilised with 90% Methanol. A Goat anti rabbit IgG (Alexa Fluor® 488, [ab150077](#)) secondary antibody was used at 1/2000. Isotype control - Rabbit monoclonal IgG (Black). Unlabeled control - Cell without incubation with primary antibody and secondary antibody (Blue).



Western blot - Anti-Nucleophosmin antibody [EP1848Y] (ab52644)

**All lanes** : Anti-Nucleophosmin antibody [EP1848Y] (ab52644) at 1/500000 dilution

**Lane 1** : HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysate

**Lane 2** : MEF (Mouse embryonic fibroblast) whole cell lysate

**Lane 3** : 3T3-L1 (Mouse embryonic fibroblast) whole cell lysate

**Lane 4** : PC-12 (Rat adrenal gland pheochromocytoma) whole cell lysate

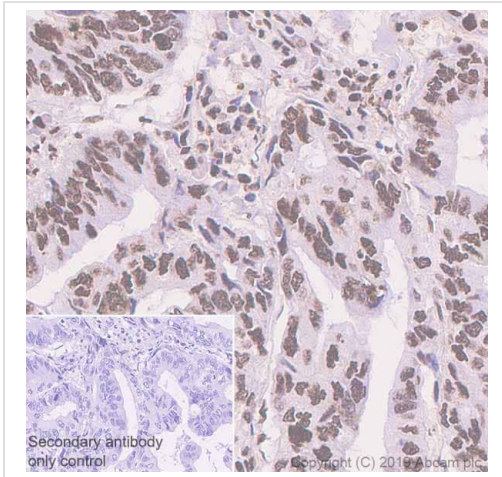
Lysates/proteins at 20 µg per lane.

**Secondary**

**All lanes** : Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) at 1/20000 dilution

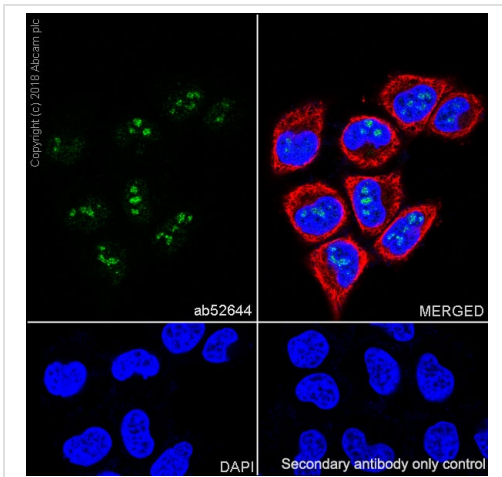
**Predicted band size:** 33 kDa

**Observed band size:** 37 kDa



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Nucleophosmin antibody [EP1848Y] (ab52644)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human cervical carcinoma tissue sections labeling Nucleophosmin with purified ab52644 at 1/300 dilution (1.14 µg/mL). Heat mediated antigen retrieval was performed using Bond™ Epitope Retrieval Solution 2 (pH 9.0). Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**) was used as the secondary antibody. Negative control: PBS instead of the primary antibody. Hematoxylin was used as a counterstain. The immunostaining was performed on a Leica Biosystems BOND® RX instrument.



Immunocytochemistry/ Immunofluorescence - Anti-Nucleophosmin antibody [EP1848Y] (ab52644)

Immunocytochemistry/Immunofluorescence analysis of HeLa (human cervix adenocarcinoma epithelial cell) cells labeling Nucleophosmin with purified ab52644 at 1/100 dilution (5 µg/mL). Cells were fixed in 4% paraformaldehyde and permeabilized with 0.1% Triton X-100. Cells were counterstained with **ab195889** Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) 1/200 (2.5 µg/mL). Goat anti rabbit IgG (Alexa Fluor® 488, **ab150077**) was used as the secondary antibody at 1/1000 dilution (2 µg/mL) dilution. DAPI was used as nuclear counterstain. PBS instead of the primary antibody was used as the secondary antibody only control.

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