


Anti-Nucleophosmin antibody [3A9F1] ab86712

★★★★★ [2 Abreviews](#) [2 References](#) [画像数 4](#)

製品の概要

製品名	Anti-Nucleophosmin antibody [3A9F1]
製品の詳細	Mouse monoclonal [3A9F1] to Nucleophosmin
由来種	Mouse
アプリケーション	適用あり: WB, Flow Cyt (Intra), ICC
種交差性	交差種: Human 交差が予測される動物種: Mouse, Rat 
免疫原	Recombinant fragment. This information is proprietary to Abcam and/or its suppliers.
ポジティブ・コントロール	This antibody gave a positive signal in HeLa and U20S whole cell lysates. ICC/IF: HeLa cells. Flow Cyt (Intra): HeLa cells.
特記事項	<p>This antibody clone is manufactured by Abcam. If you require a custom buffer formulation or conjugation for your experiments, please contact orders@abcam.com.</p> <p>The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.</p> <p>If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As</p>

製品の特性

製品の状態	Liquid
保存方法	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
バッファー	pH: 7.40 Preservative: 0.02% Sodium azide
精製度	IgG fraction
ポリ/モノ	モノクローナル
クローン名	3A9F1
アイソタイプ	IgG1

アプリケーション

The Abpromise guarantee Abpromise保証は、次のテスト済みアプリケーションにおけるab86712の使用に適用されます
アプリケーションノートには、推奨の開始希釈率がありますが、適切な希釈率につきましてはご検討ください。

アプリケーション	Abreviews	特記事項
WB	★★★★★ (1)	Use a concentration of 5 µg/ml. Detects a band of approximately 37 kDa (predicted molecular weight: 33 kDa).
Flow Cyt (Intra)		Use 1µg for 10 ⁶ cells. ab170190 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.
ICC		Use at an assay dependent concentration.

ターゲット情報

機能

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).

関連疾患

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.

配列類似性

Belongs to the nucleoplasmin family.

翻訳後修飾

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

ADP-ribosylated.

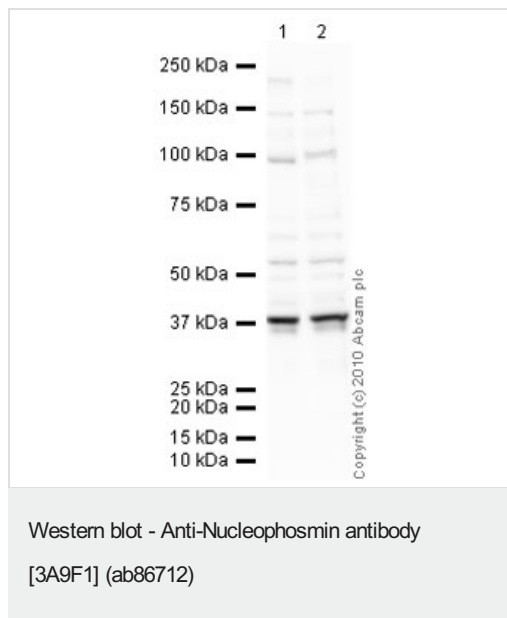
Phosphorylated at Ser-4 by PLK1 and PLK2. Phosphorylation at Ser-4 by PLK2 in S phase is required for centriole duplication and is sufficient to trigger centriole replication. Phosphorylation at Ser-4 by PLK1 takes place during mitosis. Phosphorylated by CDK2 at Ser-125 and Thr-199. Phosphorylation at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

細胞内局在

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.

画像



All lanes : Anti-Nucleophosmin antibody [3A9F1] (ab86712) at 10 μ g/ml

Lane 1 : HeLa (Human epithelial carcinoma cell line) Whole Cell Lysate

Lane 2 : U2OS (Human osteosarcoma cell line) Whole Cell Lysate

Lysates/proteins at 10 μ g per lane.

Secondary

All lanes : Goat Anti-Mouse IgG H&L (HRP) preadsorbed ([ab97040](#)) at 1/5000 dilution

Developed using the ECL technique.

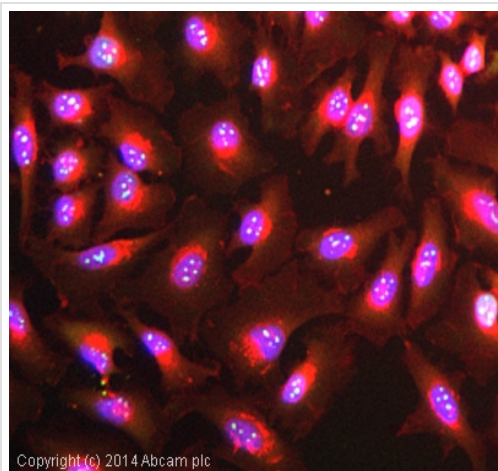
Performed under reducing conditions.

Predicted band size: 33 kDa

Observed band size: 37 kDa

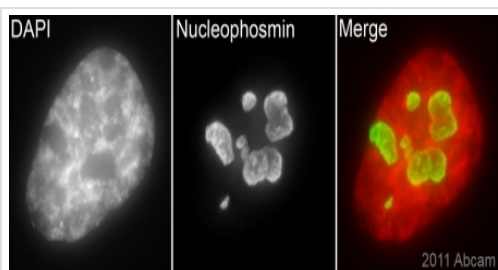
Additional bands at: 100 kDa, 150 kDa, 55 kDa. We are unsure as to the identity of these extra bands.

Exposure time: 1 minute



Immunocytochemistry - Anti-Nucleophosmin antibody [3A9F1] (ab86712)

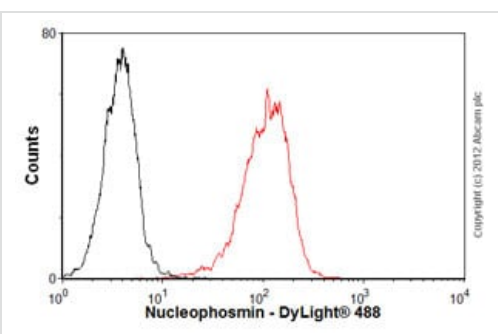
ab86712 stained HeLa cells. The cells were 100% methanol fixed for 5 minutes at -20°C and then incubated in 1%BSA / 10% normal goat serum / 0.3M glycine in 0.1% PBS-Tween for 1hour at room temperature to permeabilise the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody (ab86712 at 5µg/ml) overnight at +4°C. The secondary antibody (pseudo-colored green) was Goat Anti-Mouse IgG H&L (Alexa Fluor® 488) preadsorbed (**ab150117**) used at a 1/1000 dilution for 1hour at room temperature. Alexa Fluor® 594 WGA was used to label plasma membranes (pseudo-colored red) at a 1/200 dilution for 1hour at room temperature. DAPI was used to stain the cell nuclei (pseudo-colored blue) at a concentration of 1.43µM for 1hour at room temperature.



Immunocytochemistry - Anti-Nucleophosmin antibody [3A9F1] (ab86712)

ab86712 (1/2000) staining Nucleophosmin in asynchronous HeLa cells (green). Cells were fixed in paraformaldehyde, permeabilized with 0.5% Triton X100 and counterstained with DAPI in order to highlight the nucleus. For further experimental details, please refer to abreview. (Please note that this particular image is a 3D projection of the data).

This image is part of an abreview submitted by Dr. Kirk McManus, Univ. of Manitoba/Cancer Care MCB, Canada



Flow Cytometry (Intracellular) - Anti-Nucleophosmin antibody [3A9F1] (ab86712)

Overlay histogram showing HeLa cells stained with ab86712 (red line). The cells were fixed with 80% methanol (5 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab86712, 1µg/1x10⁶ cells) for 30 min at 22°C. The secondary antibody used was DyLight® 488 goat anti-mouse IgG (H+L) (**ab96879**) at 1/500 dilution for 30 min at 22°C. Isotype control antibody (black line) was mouse IgG1 [ICIGG1] (**ab91353**, 2µg/1x10⁶ cells) used under the same conditions. Acquisition of >5,000 events was performed.

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