abcam

Product datasheet

Anti-Nucleolin antibody ab70493

3 Abreviews 11 References 5 Images

Overview

Product name	Anti-Nucleolin antibody
Description	Rabbit polyclonal to Nucleolin
Host species	Rabbit
Tested applications	**Suitable for:** IHC-P, ICC/IF, WB, IP
Species reactivity	**Reacts with:** Mouse, Human **Predicted to work with:** Rabbit, Horse, Guinea pig, Cow, Dog, Pig, Chimpanzee, Rhesus monkey, Gorilla, African green monkey, Orangutan, Elephant
Immunogen	Synthetic peptide corresponding to a region between residue 550 and the C-terminus (residue 710) of human Nucleolin
Positive control	Whole cell lysates from HeLa cells, 293T cells and mouse NIH3T3 cells.
General notes	Reproducibility is key to advancing scientific discovery and accelerating scientists' next breakthrough. Abcam is leading the way with our range of recombinant antibodies, knockout-validated antibodies and knockout cell lines, all of which support improved reproducibility. We are also planning to innovate the way in which we present recommended applications and species on our product datasheets, so that only applications & species that have been tested in our own labs, our suppliers or by selected trusted collaborators are covered by our Abpromise™ guarantee. In preparation for this, we have started to update the applications & species that this product is Abpromise guaranteed for. We are also updating the applications & species that this product has been "predicted to work with," however this information is not covered by our Abpromise guarantee. Applications & species from publications and Abreviews that have not been tested in our own labs or in those of our suppliers are not covered by the Abpromise guarantee. Please check that this product meets your needs before purchasing. 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, as well as customer reviews and Q&As.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.
Storage buffer	pH: 6.8 Preservative: 0.09% Sodium azide Constituents: 0.1% BSA, Tris buffered saline
Purity	Immunogen affinity purified
Clonality	Polyclonal
Isotype	IgG

Applications

Our Abpromise guarantee covers the use of **ab70493** in the following tested applications.

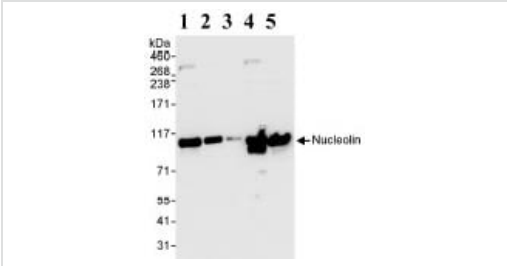
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
IHC-P		Use a concentration of 1 µg/ml. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.
ICC/IF	★★★★★	Use a concentration of 5 µg/ml.
WB	★★★★☆	1/2000 - 1/10000. Detects a band of approximately 100 kDa (predicted molecular weight: 77 kDa).
IP		Use at 2-5 µg/mg of lysate.

Target

Function	Nucleolin is the major nucleolar protein of growing eukaryotic cells. It is found associated with intranucleolar chromatin and pre-ribosomal particles. It induces chromatin decondensation by binding to histone H1. It is thought to play a role in pre-rRNA transcription and ribosome assembly. May play a role in the process of transcriptional elongation. Binds RNA oligonucleotides with 5'-UUAGGG-3' repeats more tightly than the telomeric single-stranded DNA 5'-TTAGGG-3' repeats.
Sequence similarities	Contains 4 RRM (RNA recognition motif) domains.
Post-translational modifications	Some glutamate residues are glycylated by TTLL8. This modification occurs exclusively on glutamate residues and results in a glycine chain on the gamma-carboxyl group.
Cellular localization	Nucleus > nucleolus. Cytoplasm. Localized in cytoplasmic mRNP granules containing untranslated mRNAs.

Images

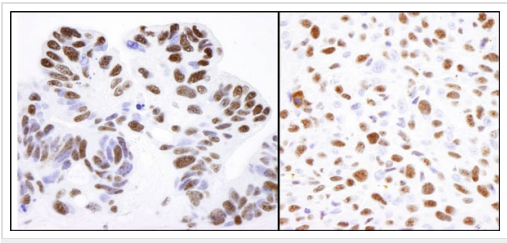


Western blot - Anti-Nucleolin antibody (ab70493)

All lanes : Anti-Nucleolin antibody (ab70493) at 0.02 µg/ml

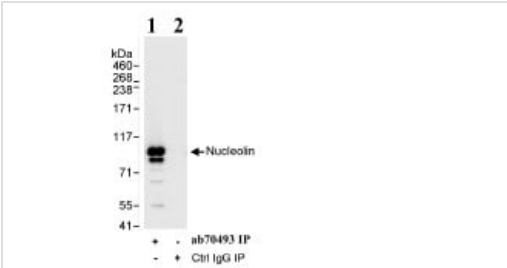
Lane 1 : Whole cell lysate from HeLa cells at 50 µg
Lane 2 : Whole cell lysate from HeLa cells at 15 µg
Lane 3 : Whole cell lysate from HeLa cells at 5 µg
Lane 4 : Whole cell lysate from 293T cells at 50 µg
Lane 5 : Whole cell lysate from NIH3T3 cells at 50 µg

Predicted band size: 77 kDa
Observed band size: 100 kDa
why is the actual band size different from the predicted?



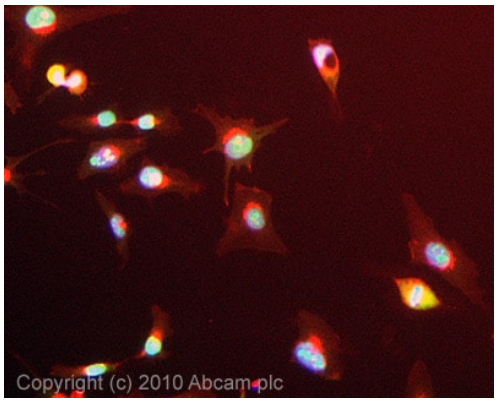
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Nucleolin antibody (ab70493)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human ovarian carcinoma (left) and mouse squamous cell carcinoma (right) tissues labelling Nucleolin with ab70493 at 1/1000 (0.2µg/ml). Detection: DAB.



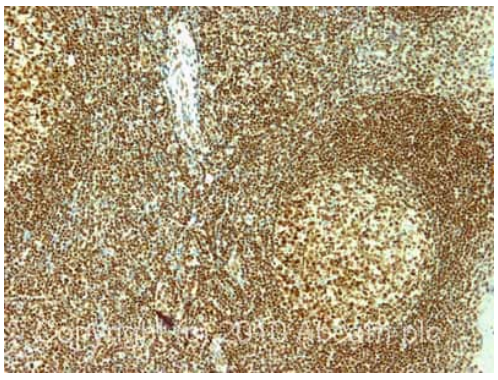
Immunoprecipitation - Anti-Nucleolin antibody (ab70493)

Detection of Human Nucleolin by Immunoprecipitation in Whole cell lysate from HeLa cells (1 mg for IP, 20% of IP loaded), using ab70493 at 3 µg/mg lysate (Lane 1). Lane 2 represents rabbit IgG IP control. Subsequent Western blot detection of nucleolin was performed using ab70493 at 1 µg/ml.



Immunocytochemistry/ Immunofluorescence - Anti-Nucleolin antibody (ab70493)

ICC/IF image of ab70493 stained HeLa cells. The cells were 4% formaldehyde fixed (10 min) and then incubated in 1%BSA / 10% normal goat serum / 0.3M glycine in 0.1% PBS-Tween for 1h to permeabilise the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody (ab70493, 5µg/ml) overnight at +4°C. The secondary antibody (green) was Alexa Fluor® 488 goat anti-rabbit IgG (H+L) used at a 1/1000 dilution for 1h. Alexa Fluor® 594 WGA was used to label plasma membranes (red) at a 1/200 dilution for 1h. DAPI was used to stain the cell nuclei (blue) at a concentration of 1.43µM.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Nucleolin antibody (ab70493)

IHC image of ab70493 staining in human normal lymph node formalin fixed paraffin embedded tissue section, performed on a Leica Bond™ system using the standard protocol F. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH6, epitope retrieval solution 1) for 20 mins. The section was then incubated with ab70493, 1µg/ml, for 15 mins at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

For other IHC staining systems (automated and non-automated) customers should optimize variable parameters such as antigen retrieval conditions, primary antibody concentration and antibody incubation times.

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