abcam

ab129200

Anti-Nucleolin antibody [EPR7952]

Anti-Nucleolin antibody [EPR7952] (ab129200) is a rabbit monoclonal antibody detecting Nucleolin in **Western Blot, Flow Cytometry (Intra), IHC-P, ICC/IF**. Suitable for **Human, Mouse, Rat**.

- Biophysical QC for unrivalled batch-batch consistency
- Over 10 publications

Recombinant | RabMAb | 20ul selling size

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Preservative: 0.01% Sodium azide Constituents: PBS, 50% Tissue culture supernatant, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR7952
Purification technique	Affinity purification Protein A
Dissociation constant	5.8 x 10^{-11} M
Concentration	0.12 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Not recommended

Species	Mouse, Rat, Human
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	1/10000 - 1/50000
Notes	-

Expected

Species	Mouse, Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/100 - 1/250
Notes	-

Expected

Species	Mouse, Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

Flow Cyt (Intra)

Tested

Species	Human

Dilution info	1/2000
Notes	-

Expected

Species	Mouse, Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

IHC-P

Tested

Species	Mouse
Dilution info	1/250 - 1/500
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Species	Rat
Dilution info	1/250 - 1/500
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Species	Human
Dilution info	1/250 - 1/500
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Target data

See full target information NCL

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.

Storage

Shipped at conditions	Conditional Ambient
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Stable for 12 months at -20°C

Notes

What is this antibody validated in?
Anti-Nucleolin antibody [EPR7952] (ab129200) is a rabbit recombinant monoclonal antibody and is validated for use in Western Blot (WB), Flow Cytometry (Intra), Immunohistochemistry (IHC-P), Immunocytochemistry/immunofluorescence (ICC/IF) in Human, Mouse, Rat samples.

What is the molecular weight of Nucleolin?
Anti-Nucleolin [EPR7952] (ab129200) specifically detects a band for Nucleolin (UniProt: P19338) at a molecular weight of 76kDa.

Trusted by the scientific community
Anti-Nucleolin [EPR7952] (ab129200) was first used in a scientific publication in 2012 and has been cited over 10 times in peer-reviewed journals.

Other related products
We have a range of other formats of antibody clone [EPR7952] also available for your convenience: ab129200, Alexa Fluor® 488 - ab202708, Alexa Fluor® 647 - ab202709, Alexa Fluor® 555 - ab203417, Carrier free - ab226113, PE - ab305946, APC - ab305947, HRP - ab305948, Alkaline Phosphatase - ab308818, Alexa Fluor® 594 - ab310551, Alexa Fluor® 568 - ab312558, Alexa Fluor® 750 - ab321037

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Trial sizes available!
Test your antibody or perform pre-screening before committing to a larger quantity. Sold in 20µl. Discover our selection of trial-size antibodies.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	Nucleolin also known as C23 is a multifunctional protein mainly found in the nucleolus with a molecular weight of approximately 100 kDa. It plays a mechanical role in ribosomal RNA (rRNA) synthesis and ribosome biogenesis. Nucleolin is widely expressed in proliferating cells including HeLa culture and shows higher expression in cancer cells compared to normal cells. The nucleolin protein is involved in various nucleolar processes like the modulation of chromatin structure and nucleocytoplasmic transport.
Biological function summary	The nucleolin molecular weight protein contributes to regulating cellular processes such as chromatin remodeling rRNA transcription and mRNA stability. Nucleolin often forms complexes with various other proteins and nucleic acids enhancing its functionality within the cell nucleus. Its participation in processes like DNA replication and cell proliferation shows the central role nucleolin plays at the cellular level. It influences cellular responses by binding directly to specific RNA or DNA sequences.
Pathways	The nucleolin protein engages in major cellular pathways such as the RNA processing and p53 signaling pathways. Through the RNA processing pathway it interacts with proteins like fibrillarin to assist in rRNA maturation. Moreover within the p53 signaling pathway nucleolin regulates the activity of the tumor suppressor protein p53 impacting cell cycle progression and apoptosis. These interactions highlight nucleolin's role in maintaining cellular homeostasis and response to stress.
Associated diseases and disorders	The nucleolin protein often shows altered expression in cancers and cardiovascular diseases. In cancer nucleolin's high expression levels correlate with tumor progression and metastasis making it a potential target for cancer therapies. In cardiovascular diseases nucleolin interacts with proteins like VEGF to influence angiogenesis which affects disease progression. Understanding nucleolin's involvement in these diseases provides insight into potential therapeutic targets and interventions.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

We do not recommend this combination. It is not covered by our product promise.

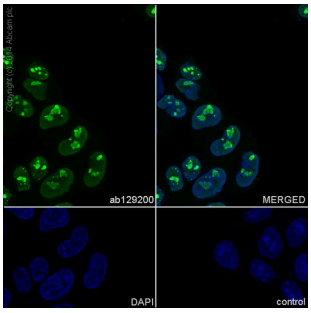
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

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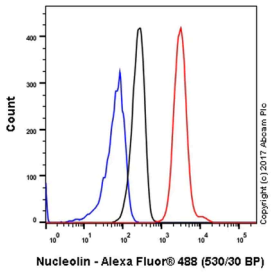
7 product images



Immunocytochemistry/ Immunofluorescence - Anti-Nucleolin antibody [EPR7952] (ab129200)

Nucleolin Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Nucleolin antibody

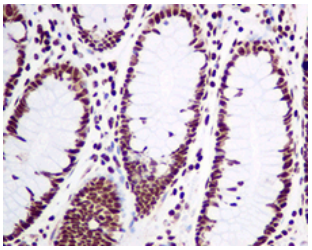
Immunocytochemistry/ Immunofluorescence analysis of HT-29(Human colorectal adenocarcinoma epithelial cell) cells labeling Nucleolin with purified ab129200 at 1/500 dilution (4.5 µg/ml). Cells were fixed in 4% paraformaldehyde and permeabilized with 0.1% Triton X-100. Cells were counterstained with ab195889 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.



Flow Cytometry (Intracellular) - Anti-Nucleolin antibody [EPR7952] (ab129200)

Nucleolin Flow Cytometry (Intracellular) staining using rabbit Anti-Nucleolin antibody

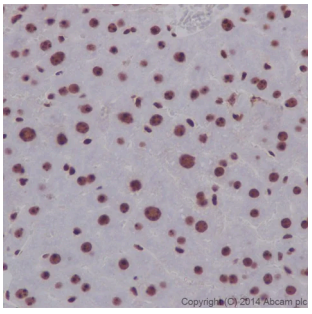
Intracellular Flow Cytometry analysis of HeLa (human cervix adenocarcinoma) cells labeling Nucleolin (red) with ab129200 at a 1/2000 dilution. Cells were fixed with 80% methanol and permeabilized with 0.1% Tween-20. A goat anti-rabbit IgG (Alexa Fluorr® 488) (ab150077) was used as the secondary antibody at a 1/2000 dilution. Black - Rabbit monoclonal IgG (ab172730). Blue (unlabeled control) - Cells without incubation with the primary and secondary antibodies.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Nucleolin antibody [EPR7952] (ab129200)

Nucleolin Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Nucleolin antibody

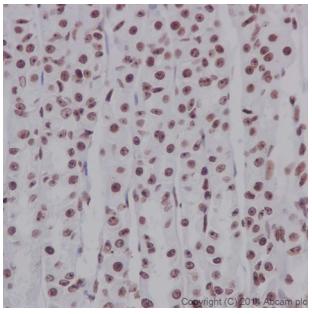
ab129200, at 1/250 dilution, staining Nucleolin in paraffin-embedded Human colon tissue by Immunohistochemistry.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Nucleolin antibody [EPR7952] (ab129200)

Nucleolin Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Nucleolin antibody

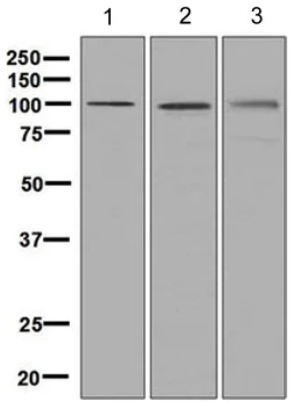
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of mouse liver tissue labelling Nucleolin with ab129200 at 1/500. Heat mediated antigen retrieval was performed using Tris/EDTA buffer pH 9. A ready to use HRP-conjugated goat anti-rabbit IgG (H+L) was used as the secondary antibody. Counterstained with hematoxylin.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Nucleolin antibody [EPR7952] (ab129200)

Nucleolin Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Nucleolin antibody

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of rat liver tissue labelling Nucleolin with ab129200 at 1/500. Heat mediated antigen retrieval was performed using Tris/EDTA buffer pH 9. A ready to use HRP-conjugated goat anti-rabbit IgG (H+L) was used as the secondary antibody. Counterstained with hematoxylin.



Western blot - Anti-Nucleolin antibody [EPR7952] (ab129200)

All lanes:
Western blot - Anti-Nucleolin antibody [EPR7952] (ab129200) at 1/10000 dilution

Lane 1:
Fetal brain lysate at 10 µg

Lane 2:
K562 cell lysate at 10 µg

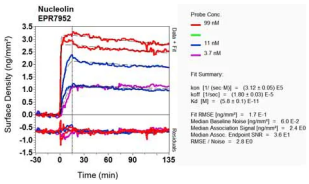
Lane 3:
HuT-78 cell lysate at 10 µg

Secondary

All lanes:
Goat anti-rabbit HRP at 1/2000 dilution

Predicted band size: 76 kDa

Observed band size: 100 kDa



OI-RD Scanning - Anti-Nucleolin antibody [EPR7952] (ab129200)

We have systematically measured KD (the equilibrium dissociation constant between the antibody and its antigen), of more than 840 recombinant antibodies to assess not only their individual KD values but also to see the average affinity of antibody. Based on the comparison with published literature values for mouse monoclonal antibodies, Recombinant antibodies appear to be on average 1-2 order of magnitude higher affinity.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.