abcam

ab226113

Anti-Nucleolin antibody [EPR7952] - BSA and Azide free

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	EPR7952
Purification technique	Affinity purification Protein A
Dissociation constant	5.8 x 10^{-11} M
Concentration	1.02 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

Expected

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

ICC/IF

Expected

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

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

Expected

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

Predicted

Species	Mouse
Dilution info	-

Notes	-

IHC-P

Tested

Species	Rat
Dilution info	-
Notes	-

Expected

Species	Human
Dilution info	Use at an assay dependent concentration.
Notes	-

Predicted

Species	Mouse
Dilution info	-
Notes	-

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	Blue Ice
Appropriate short-term storage conditions	+4°C

Appropriate long-term storage conditions	+4°C
Storage information	Do Not Freeze

Notes

ab226113 is the carrier-free version of ab129200.

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.

Conjugation ready

Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with 1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

Compatibility

This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc.

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

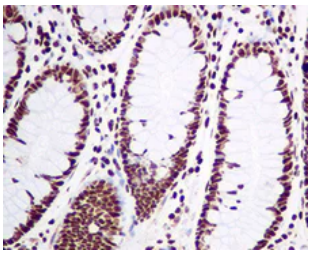
We do not recommend this combination. It is not covered by our product promise.

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.

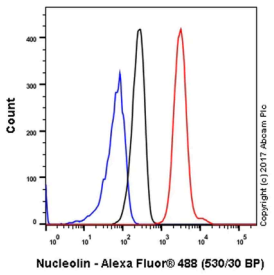
5 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Nucleolin antibody [EPR7952] - BSA and Azide free (ab226113)

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

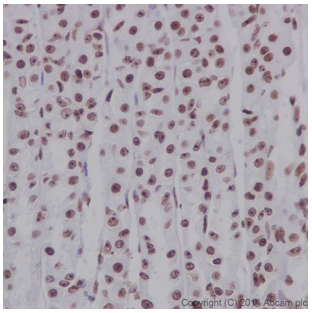
ab129200, at 1/250 dilution, staining Nucleolin in paraffin-embedded Human colon tissue by Immunohistochemistry.This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab129200).



Flow Cytometry (Intracellular) - Anti-Nucleolin antibody [EPR7952] - BSA and Azide free (ab226113)

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

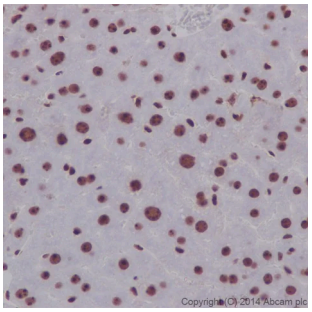
Intracellular Flow Cytometry analysis of HeLa (human cervix adenocarcinoma) cells labeling Nucleolin (red) with ab129200 at a 1/2000 dilution. Cells were fixed with 80% methanol and permeabilized with 0.1% Tween-20. A goat anti-rabbit IgG (Alexa Fluor® 488) (ab150077) was used as the secondary antibody at a 1/2000 dilution. Black - Rabbit monoclonal IgG (ab172730). Blue (unlabeled control) - Cells without incubation with the primary and secondary antibodies.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab129200).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Nucleolin antibody [EPR7952] - BSA and Azide free (ab226113)

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

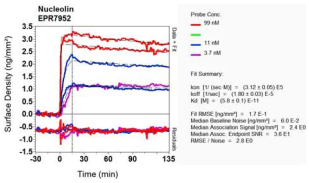
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of rat liver tissue labelling Nucleolin with ab129200 at 1/500. Heat mediated antigen retrieval was performed using Tris/EDTA buffer pH 9. A ready to use HRP-conjugated goat anti-rabbit IgG (H+L) was used as the secondary antibody. Counterstained with hematoxylin.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab129200).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Nucleolin antibody [EPR7952] - BSA and Azide free (ab226113)

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.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab129200).



OI-RD Scanning - Anti-Nucleolin antibody [EPR7952] - BSA and Azide free (ab226113)

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'.