abcam

ab176556

Anti-Nuf2 antibody [EPR13018(B)]

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	Preservative: 0.01% Sodium azide Constituents: PBS, 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	EPR13018(B)
Purification technique	Affinity purification Protein A
Concentration	0.594 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

WB

Tested

Species	Human
Dilution info	1/1000 - 1/2000
Notes	-

IHC-P

Not recommended

Species	Human
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/500 - 1/1000
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/10 - 1/100
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Target data

See full target information NUF2

Function Acts as a component of the essential kinetochore-associated NDC80 complex, which is required for chromosome segregation and spindle checkpoint activity (PubMed:12438418, PubMed:14654001, PubMed:15062103, PubMed:15235793, PubMed:15239953, PubMed:15548592, PubMed:17535814). Required for kinetochore integrity and the organization of stable microtubule binding sites in the outer plate of the kinetochore (PubMed:15548592). The NDC80 complex synergistically enhances the affinity of the SKA1 complex for microtubules and may allow the NDC80 complex to track depolymerizing microtubules (PubMed:23085020).

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	Avoid freeze / thaw cycle

Notes

Species reactivity
Mouse, Rat: We have preliminary internal testing data to indicate this antibody may not react with these species. Please contact us for more information.

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.

Supplementary info

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

Activity summary	Nuf2 also known as CDCA1 is a protein involved in the regulation of mitosis. It weighs approximately 53 kDa and plays an important role in kinetochore function. You can find its expression in various human tissues with a high presence in dividing cells. This protein is part of the essential process of chromosome segregation during cell division.
Biological function summary	Nuf2 is necessary for maintaining mitotic spindle checkpoint fidelity. It forms part of the NDC80 complex an important player in chromosome alignment and separation. This complex contains other proteins such as HEC1 SPC25 and SPC24 and ensures that chromosomes are properly attached to spindle microtubules. Accurate spindle checkpoint functioning prevents errors that could lead to aneuploidy.

Pathways	Nuf2 participates in the mitotic spindle assembly checkpoint. It interacts with kinetochore proteins like HEC1 which integrates Nuf2's role in the chromosome passenger complex essential for proper mitotic progression. The NDC80 complex including Nuf2 is also linked to the cell cycle regulation pathway. This connection helps cells maintain genetic stability during division.
Associated diseases and disorders	Nuf2's function and its role in cell division link it to cancer development. Its dysregulation can contribute to chromosomal instability a hallmark of many cancers. Nuf2's association with HEC1 highlights its aberrant expression in tumorigenesis. Additionally defects in its function can relate to neurodegenerative disorders like Alzheimer's disease as cellular division errors may cause neuronal loss or malfunction.

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

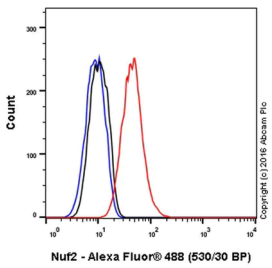
We do not recommend this combination. It is not covered by our product promise.

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.

6 product images

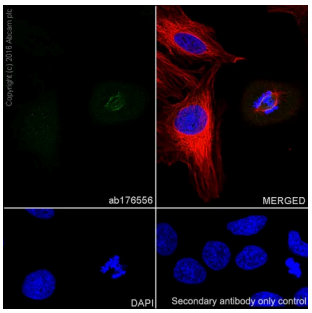


Flow Cytometry (Intracellular) - Anti-Nuf2 antibody [EPR13018(B)] (ab176556)

Nuf2 Flow Cytometry (Intracellular) staining using rabbit Anti-Nuf2 antibody

ab176556 staining Nuf2 in the human cell line 293T (Human epithelial cell line from embryonic kidney)by intracellular flow cytometry. Cells were fixed with 4% paraformaldehyde and the sample was incubated with the primary antibody at a dilution of 1/60. A goat anti rabbit IgG (Alexa Fluor® 488) at a dilution of 1/2000 was used as the secondary antibody.
Isoytype control: Rabbit monoclonal IgG (Black)

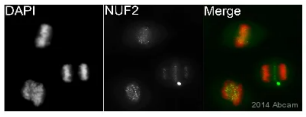
Unlabelled control: Cell without incubation with primary antibody and secondary antibody (Blue)



Immunocytochemistry/ Immunofluorescence - Anti-Nuf2 antibody [EPR13018(B)] (ab176556)

Nuf2 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Nuf2 antibody

ab176556 staining Nuf2 in HeLa (human cervix adenocarcinoma) cells by ICC/IF (Immunocytochemistry/immunofluorescence). Cells were fixed with 4% Paraformaldehyde and permeabilized with 0.1% Triton X-100. Samples were incubated with primary antibody at a dilution of 1/1000. A goat anti rabbit IgG (Alexa Fluor® 488) (ab150077) was used as the secondary antibody at a dilution of 1/1000. ab195889 was used as a tubulin counterstain at a dilution of 1/200 and DAPI was used as a nuclear counterstain.

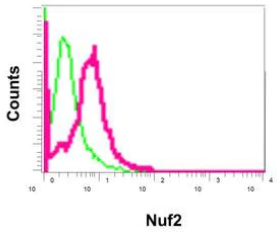


This image is courtesy of a customer review submitted by Kirk McManus

Immunocytochemistry/ Immunofluorescence - Anti-Nuf2 antibody [EPR13018(B)] (ab176556)

Nuf2 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Nuf2 antibody

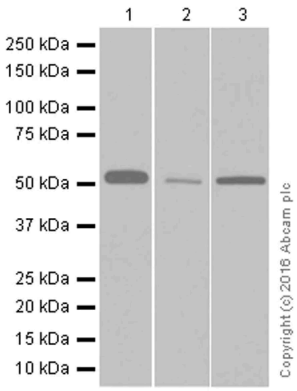
ab176556 staining Nuf2 in HeLa cells by ICC/IF (Immunocytochemistry/immunofluorescence). Cells were fixed with paraformaldehyde and permeabilized with 0.5% Triton X-100 in PBS. Samples were incubated with primary antibody (1/500 in PBS) for 1 hour at 22°C. ab150081, an Alexa Fluor® 488-conjugated goat anti-rabbit IgG polyclonal (1/200) was used as the secondary antibody. Counterstained with DAPI.



Flow Cytometry (Intracellular) - Anti-Nuf2 antibody [EPR13018(B)] (ab176556)

Nuf2 Flow Cytometry (Intracellular) staining using rabbit Anti-Nuf2 antibody

Intracellular Flow Cytometry analysis of permeabilized 293T cells labeling Nuf2 (red), using ab176556 at a 1/10 dilution, or negative control rabbit IgG (green)



Western blot - Anti-Nuf2 antibody [EPR13018(B)] (ab176556)

Blocking and diluting buffer: 5% NFDM/TBST
All lanes:
Western blot - Anti-Nuf2 antibody [EPR13018(B)] (ab176556) at 1/2000 dilution

Lane 1:
HEK-293 (Human epithelial cell line from embryonic kidney) whole cell lysate at 20 µg

Lane 2:
A431 (Human epidermoid carcinoma cell line) whole cell lysate at 20 µg

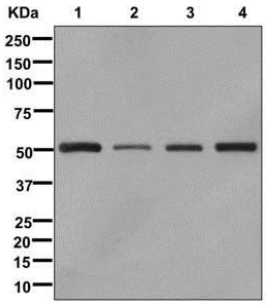
Lane 3:
HeLa (Human epithelial cell line from cervix adenocarcinoma) whole cell lysate at 20 µg

Secondary

All lanes:
Anti-Rabbit IgG (HRP), specific to the non-reduced form of IgG at 1/2000 dilution

Predicted band size: 54 kDa

Observed band size: 54 kDa



Western blot - Anti-Nuf2 antibody [EPR13018(B)] (ab176556)

All lanes:
Western blot - Anti-Nuf2 antibody [EPR13018(B)] (ab176556) at 1/1000 dilution

Lane 1:
293T cell lysate at 10 µg

Lane 2:
Human fetal liver lysate at 10 µg

Lane 3:
A431 cell lysate at 10 µg

Lane 4:
HeLa cell lysate at 10 µg

Developed using the ECL technique.

Predicted band size: 54 kDa

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