abcam

ab270118

Alexa Fluor® 488 Anti-Pericentrin antibody [EPR21987] - Centrosome Marker

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Conjugation	Alexa Fluor® 488
Excitation/Emission	Ex: 495nm, Em: 519nm
Storage buffer	Preservative: 0.02% Sodium azide Constituents: PBS, 30% Glycerol (glycerin, glycerine), 1% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR21987
Purification technique	Affinity purification Protein A
Concentration	0.5 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Human
Dilution info	1/50
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Not recommended

Species	Mouse
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Mouse
Dilution info	1/50
Notes	-

Species	Human
Dilution info	1/500
Notes	This product gave a positive signal in HeLa fixed with 4% formaldehyde (10 min) and 100% methanol (5 min).

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/2500
Notes	-

Expected

Species	Mouse
Dilution info	Use at an assay dependent concentration.

Notes	-

Target data

See full target information PCNT

Function	Integral component of the filamentous matrix of the centrosome involved in the initial establishment of organized microtubule arrays in both mitosis and meiosis. Plays a role, together with DISC1, in the microtubule network formation. Is an integral component of the pericentriolar material (PCM). May play an important role in preventing premature centrosome splitting during interphase by inhibiting NEK2 kinase activity at the centrosome.

Storage

Shipped at conditions	Blue Ice
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, Store in the dark

Notes

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.

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Supplementary info

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

Activity summary	Pericentrin also known as PCNT is a large protein with a mass of approximately 360 kDa. It primarily localizes at the centrosome an organelle serving as the main microtubule organizing center in cells. Expressed in most cell types pericentrin is an essential structural component of the centrosome. Researchers often use pericentrin staining techniques to visualize centrosomes aiding in the study of cell division. This protein functions prominently as a centrosome marker facilitating centrosome image and imaging of centrosome-related structures.
Biological function summary	Pericentrin contributes significantly to maintaining centrosome integrity and organizing microtubules during cell division. It is a part of the pericentriolar material a complex that stabilizes and anchors microtubules to the centrosome. By forming a scaffold at the centrosome pericentrin plays an important role in recruiting other proteins like γ-tubulin enhancing its function in nucleating microtubules. The pericentrin protein is vital for proper spindle organization during mitosis affecting accurate chromosome segregation.
Pathways	Pericentrin is integral to the cell cycle and mitotic spindle assembly pathways. It interacts with several other proteins involved in mitosis including γ-tubulin and ninein to manage the assembly and stability of the mitotic spindle. By participating in these pathways pericentrin ensures correct cellular replication and division therefore maintaining genetic stability within organisms.
Associated diseases and disorders	Mutations in the pericentrin gene have been linked to microcephalic osteodysplastic primordial dwarfism type II and Seckel syndrome. These conditions suggest a connection between defective pericentrin function and disruptions in cell division and growth. Studies also show that alterations in pericentrin levels can influence tumorigenesis by affecting centrosome function and chromosome segregation increasing the importance of this protein in cancer research.

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.

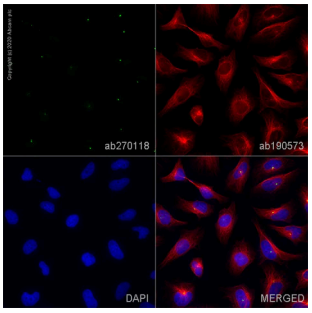
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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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5 product images

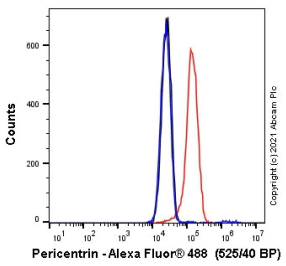


Immunocytochemistry/ Immunofluorescence - Alexa Fluor® 488 Anti-Pericentrin antibody [EPR21987] - Centrosome Marker (ab270118)

Pericentrin Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Pericentrin antibody

ab270118 staining Pericentrin in HeLa cells. The cells were fixed with 4% formaldehyde (10 min), permeabilized with 0.1% Triton X-100 for 5 minutes and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1% PBS-Tween for 1h. The cells were then incubated overnight at +4°C with ab270118 at 1/500 dilution (shown in green) and ab190573, Rabbit monoclonal to alphaTubulin (Alexa Fluor® 647), at 1/250 dilution (shown in red). Nuclear DNA was labelled with DAPI (shown in blue).
Image was acquired with a high-content analyser (Operetta CLS, Perkin Elmer) and a maximum intensity projection of confocal sections is shown.

This product also gave a positive signal under the same testing conditions in HeLa cells fixed with 100% methanol (5 min).



Flow Cytometry (Intracellular) - Alexa Fluor® 488 Anti-Pericentrin antibody [EPR21987] - Centrosome Marker (ab270118)

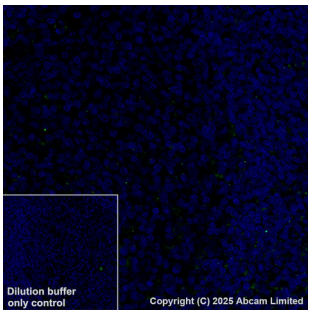
Pericentrin Flow Cytometry (Intracellular) staining using rabbit Anti-Pericentrin antibody

Flow cytometry overlay histogram showing HeLa cells stained with ab270118 (red line). The cells were fixed with 80 % methanol (5 min) and then permeabilized with 0.1% PBS-Triton X-100 for 15 min. The cells were incubated in 1x PBS containing 10 % normal goat serum to block non-specific protein-protein interaction followed by the antibody (ab270118) (1x 10^6 in 100µL at 0.2µg/mL (1/2500)) for 30 min at 22°C.

Isotype control antibody (black line) was Rabbit IgG (monoclonal) Alexa Fluor 488 ® (ab199091) used at the same concentration and conditions as the primary antibody. Unlabelled sample (blue line) was also used as a control.

Acquisition of >5000 events were collected using a 50 mW Blue laser (488nm) and 525/40 bandpass filter.

This antibody gave a positive signal in HeLa cells fixed with 4 % formaldehyde (10 min) / permeabilized with 0.1% PBS-Triton X-100 for 15 min used under the same conditions.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Alexa Fluor® 488 Anti-Pericentrin antibody [EPR21987] - Centrosome Marker (ab270118)

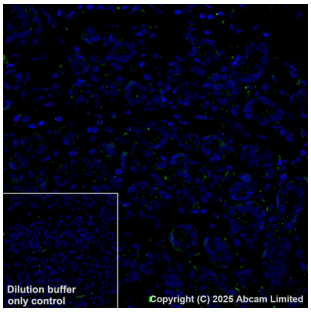
Pericentrin Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Human tonsil using rabbit Anti-Pericentrin antibody

Immunohistochemical analysis of paraffin-embedded human tonsil tissue labeling Pericentrin with ab270118 at 1/50 dilution.
Positive staining on human tonsil.

The section was incubated with ab270118 for 60 mins at room temperature (shown in green). Nuclear DNA was labeled with DAPI (shown in blue). The section was then mounted using Fluoromount®.

The immunostaining was performed on a Leica Biosystems BOND RX instrument. Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).

Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 40 mins.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Alexa Fluor® 488 Anti-Pericentrin antibody [EPR21987] - Centrosome Marker (ab270118)

Pericentrin Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Human breast using rabbit Anti-Pericentrin antibody

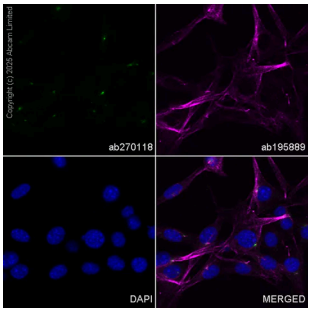
Immunohistochemical analysis of paraffin-embedded Human breast tissue labeling Pericentrin with ab270118 at 1/50 dilution.
Positive staining on human breast.

The section was incubated with ab270118 for 60 mins at room temperature (shown in green). Nuclear DNA was labeled with DAPI (shown in blue). The section was then mounted using

Fluoromount®.

The immunostaining was performed on a Leica Biosystems BOND RX instrument. Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).

Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 40 mins.



Immunocytochemistry/ Immunofluorescence - Alexa Fluor® 488 Anti-Pericentrin antibody [EPR21987] - Centrosome Marker (ab270118)

Pericentrin Immunocytochemistry/ Immunofluorescence staining of NIH/3T3 (mouse embryonic fibroblast) using rabbit Anti-Pericentrin antibody

Immunofluorescent analysis of 100% methanol-fixed, 0.1% TritonX-100 permeabilized NIH/3T3 (mouse embryonic fibroblast) cells labelling Pericentrin with ab270118 at 1/50 dilution. Confocal image showing centriole staining in NIH/3T3 cell line (shown in green). The counterstain was observed in magenta. Nuclear DNA was labelled with DAPI (shown in blue).

Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).

Anti-alpha Tubulin mouse monoclonal antibody - Microtubule Marker (Alexa Fluor® 594) (ab195889) was used to counterstain tubulin at 1/200 dilution.

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