abcam

ab237034

Anti-Pericentrin antibody [EPR21987] - 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	EPR21987
Purification technique	Affinity purification Protein A
Concentration	0.991 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Not recommended

Species	Mouse, Human
Dilution info	-

Notes	-

ICC/IF

Tested

Species	Mouse
Dilution info	-
Notes	-

Expected

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

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

Expected

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

IHC-P

Tested

Species	Human
Dilution info	-
Notes	-

Not recommended

Species	Mouse
Dilution info	-
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 conditions	+4°C
Appropriate long-term storage conditions	+4°C
Storage information	Do Not Freeze

Notes

ab237034 is the carrier-free version of ab220784.

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	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

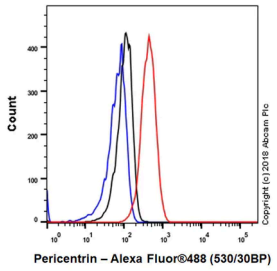
We do not recommend this combination. It is not covered by our product promise.

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.

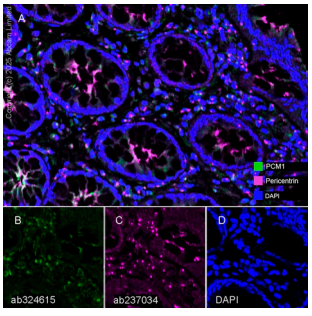
7 product images



Flow Cytometry (Intracellular) - Anti-Pericentrin antibody [EPR21987] - BSA and Azide free (ab237034)

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

Intracellular flow cytometric analysis of 4% paraformaldehyde-fixed, 90% methanol-permeabilized HeLa (human epithelial cell line from cervix adenocarcinoma) cell line labeling Pericentrin with ab220784 at 1/60 dilution (red) compared with a Rabbit IgG, monoclonal [EPR25A] - Isotype Control (ab172730) (black) and an unlabeled control (cells incubated with secondary antibody only) (blue). Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) at 1/2000 dilution was used as the secondary antibody.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab220784).



Multiplex immunohistochemistry - Anti-Pericentrin antibody [EPR21987] - BSA and Azide free (ab237034)

Pericentrin Multiplex immunohistochemistry staining of Human colon using rabbit Anti-Pericentrin antibody

Multiplex immunohistochemistry analysis of formalin/PFA-fixed paraffin-embedded human colon tissue staining PCM1 with ab324615 at a 1:200 (2.5 ug/ml) dilution, ab237034 anti-Pericentrin used at 1:200 (5.0 ug/ml) dilution.

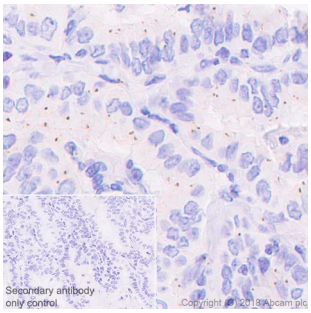
Panel A: merged staining of anti-PCM1 (green; Opal™520) and anti-Pericentrin (magenta; Opal™570) on human colon.
Panel B: anti-PCM1 staining centrosomes in human colon.
Panel C: ant-Pericentrin staining centrosomes in human colon.
Panel D: Nuclear DNA was labeled with DAPI (shown in blue).

The section was incubated in three rounds of staining: in the order of ab324615 and ab237034 for 30 mins at room temperature. Each round was followed by a separate fluorescent tyramide signal amplification system.

The immunostaining was performed on a Leica Biosystems BOND® RX instrument with an Opal™ 4-color kit. Image acquisition was performed with Leica SP8 confocal microscope.

Nuclear counter stain with DAPI.

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins.



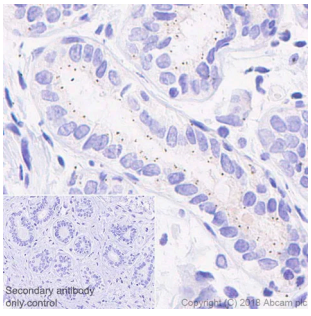
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Pericentrin antibody [EPR21987] - BSA and Azide free (ab237034)

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

Immunohistochemical analysis of paraffin-embedded human thyroid carcinoma tissue labeling Pericentin with ab220784 at 1/2000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) Ready to use. Positive staining of centrosomes in human thyroid carcinoma (PMID: 16534625, PMID: 22031837). Counterstained with hematoxylin.
Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) Ready to use.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab220784).

Heat mediated antigen retrieval was performed with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



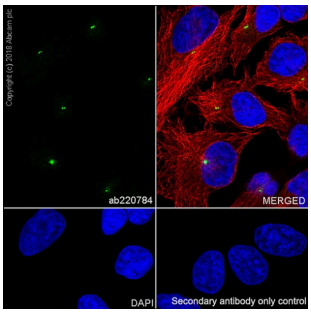
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Pericentrin antibody [EPR21987] - BSA and Azide free (ab237034)

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

Immunohistochemical analysis of paraffin-embedded human breast tissue labeling Pericentin with ab220784 at 1/2000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) Ready to use. Positive staining of centrosomes in human mammary epithelial cells (PMID: 16534625, PMID: 22031837). Counterstained with hematoxylin.
Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) Ready to use.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab220784).

Heat mediated antigen retrieval was performed with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



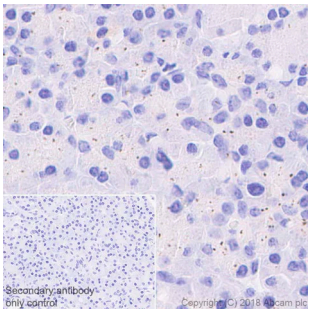
Immunocytochemistry/ Immunofluorescence - Anti-Pericentrin antibody [EPR21987] - BSA and Azide free (ab237034)

Pericentrin Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Pericentrin antibody

Immunofluorescent analysis of 100% Methanol-fixed HeLa (human epithelial cell line from cervix adenocarcinoma) cells labeling Pericentrin with ab220784 at 1/2000 dilution, followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution (green). Confocal image showing centrosome staining in HeLa cell line.
The nuclear counter stain is DAPI (blue). Tubulin is detected with Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) (ab195889) (red) at 1/200 dilution.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab220784).

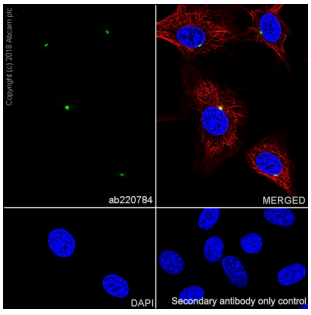


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Pericentrin antibody [EPR21987] - BSA and Azide free (ab237034)

Immunohistochemical analysis of paraffin-embedded human pancreas tissue labeling Pericentin with ab220784 at 1/2000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) Ready to use. Positive staining of centrosomes in human pancreas (PMID: 16534625, PMID: 22031837). Counterstained with hematoxylin.
Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) Ready to use.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab220784).

Heat mediated antigen retrieval was performed with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Immunocytochemistry/ Immunofluorescence - Anti-Pericentrin antibody [EPR21987] - BSA and Azide free (ab237034)

Pericentrin Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Pericentrin antibody

Immunofluorescent analysis of 100% Methanol-fixed NIH/3T3 (mouse embyro fibroblast cell line) cells labeling Pericentrin with ab220784 at 1/2000 dilution, followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution (green). Confocal image showing centrosome staining in NIH/3T3 cell line.
The nuclear counter stain is DAPI (blue). Tubulin is detected with Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) (ab195889) (red) at 1/200 dilution.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab220784).

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