abcam

Product datasheet

# Anti-Pericentrin antibody - Centrosome Marker ab4448

★★★★★ 35 Abreviews 487 References 5 Images

## Overview

| | |
|---|---|
| **Product name** | Anti-Pericentrin antibody - Centrosome Marker |
| **Description** | Rabbit polyclonal to Pericentrin - Centrosome Marker |
| **Host species** | Rabbit |
| **Specificity** | This antibody should recognise both Pericentrin and Kendrin (also known as Pericentrin-2). |
| **Tested applications** | **Suitable for:** ICC/IF |
| **Species reactivity** | **Reacts with:** Mouse, Human<br>**Predicted to work with:** Rat, Rabbit, African green monkey |
| **Immunogen** | Recombinant fragment. This information is proprietary to Abcam and/or its suppliers. |
| **Positive control** | ICC/IF: Human coronary artery endothelial, MCF7, HeLa and NIH/3T3 cells. |
| **General notes** | The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.<br>If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As |

## Properties

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|---|---|
| **Form** | Liquid |
| **Storage instructions** | Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle. |
| **Storage buffer** | pH: 7.40<br>Preservative: 0.02% Sodium azide<br>Constituents: PBS, 1% BSA<br><br>Batches of this product that have a concentration < 1mg/ml may have BSA added as a stabilising agent. If you would like information about the formulation of a specific lot, please contact our scientific support team who will be happy to help. |
| **Purity** | Protein G purified |
| **Clonality** | Polyclonal |

| | |
|---|---|
| **Isotype** | IgG |

## Applications

**The Abpromise guarantee** Our **Abpromise guarantee** covers the use of ab4448 in the following tested applications.

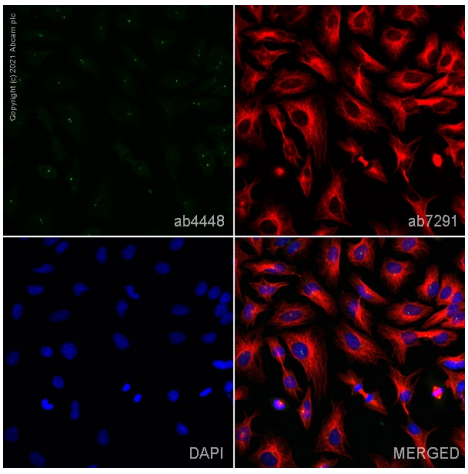
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

| Application | Abreviews | Notes |
|---|---|---|
| **ICC/IF** | ★★★★★ **(30)** | Use a concentration of 0.1 - 0.5 µg/ml. |

## Target

| | |
|---|---|
| **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. |
| **Tissue specificity** | Expressed in all tissues tested, including placenta, liver, kidney and thymus. |
| **Involvement in disease** | Microcephalic osteodysplastic primordial dwarfism 2 |
| **Domain** | Composed of a coiled-coil central region flanked by non-helical N- and C-terminals. |
| **Cellular localization** | Cytoplasm > cytoskeleton > microtubule organizing center > centrosome. Centrosomal at all stages of the cell cycle. Remains associated with centrosomes following microtubule depolymerization. Colocalized with DISC1 at the centrosome. |

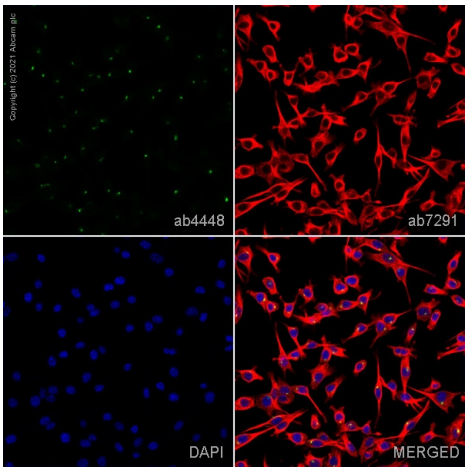
## Images




Immunocytochemistry/ Immunofluorescence - Anti-Pericentrin antibody - Centrosome Marker (ab4448)

ab4448 staining Pericentrin in HeLa cells. The cells were fixed with 100% methanol (5 min), permeabilized with 0.1% PBS-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 ab4448 at 0.1µg/ml and **ab7291**, Mouse monoclonal [DM1A] to alpha Tubulin - Loading Control. Cells were then incubated with **ab150081**, Goat polyclonal Secondary Antibody to Rabbit IgG - H&L (Alexa Fluor® 488), pre-adsorbed at 1/1000 dilution (shown in green) and **ab150120**, Goat polyclonal Secondary Antibody to Mouse IgG - H&L (Alexa Fluor® 594), pre-adsorbed at 1/1000 dilution (shown in pseudocolour red). Nuclear DNA was labelled with DAPI (shown in blue).

Image was acquired with a confocal microscope (Leica-Microsystems TCS SP8) and a single confocal section is shown.

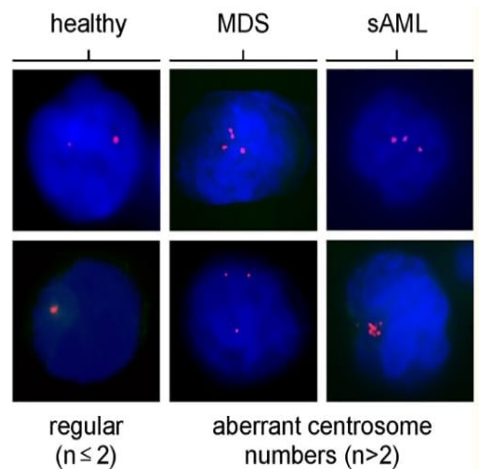



Immunocytochemistry/ Immunofluorescence - Anti-Pericentrin antibody - Centrosome Marker (ab4448)

ab4448 staining Pericentrin in NIH3T3 cells. The cells were fixed with 4% paraformaldehyde (10 min), permeabilized with 0.1% PBS-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 ab4448 at 0.1µg/ml and **ab7291**, Mouse monoclonal [DM1A] to alpha Tubulin - Loading Control. Cells were then incubated with **ab150081**, Goat polyclonal Secondary Antibody to Rabbit IgG - H&L (Alexa Fluor® 488), pre-adsorbed at 1/1000 dilution (shown in green) and **ab150120**, Goat polyclonal Secondary Antibody to Mouse IgG - H&L (Alexa Fluor® 594), pre-adsorbed at 1/1000 dilution (shown in pseudocolour red). Nuclear DNA was labelled with DAPI (shown in blue).

Also suitable in cells fixed with 100% methanol (5 min).

Image was acquired with a confocal microscope (Leica-Microsystems TCS SP8) and a single confocal section is shown.



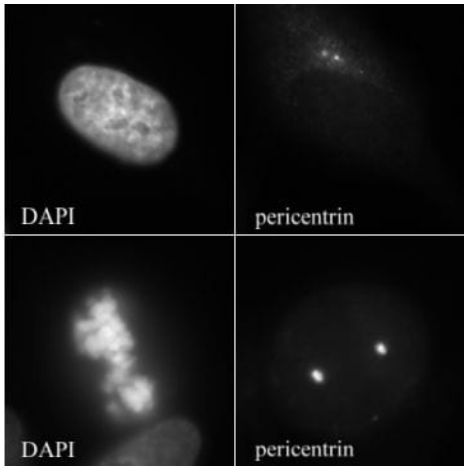

Immunocytochemistry/ Immunofluorescence - Anti-Pericentrin antibody - Centrosome Marker (ab4448)

Ruppenthal et al PLoS One. 2018 Jan 25;13(1):e0191734. doi: 10.1371/journal.pone.0191734. eCollection 2018. Fig 2. Reproduced under the Creative Commons license http://creativecommons.org/licenses/by/4.0/

**A representative panel of indirect immunofluorescence microscopic images shows normal (regular, n ≤ 2) and aberrant centrosome numbers (n > 2) in interphase cells.**

Centrosomes were stained using anti-pericentrin antibody ab4448 (magenta), nuclear DNA is shown in blue (DAPI).

Statistical methods: Kruskal-Wallis test. Mann-Whitney U tests followed by Bonferroni-Holm p-value correction were made as post-hoc tests in order to compare the MDS and sAML patients with the control group.




Immunocytochemistry/ Immunofluorescence - Anti-Pericentrin antibody - Centrosome Marker (ab4448)

This image is courtesy of Gordon Chan, University of Alberta

**IF staining of pericentrin in MCF7 (Human breast adenocarcinoma cell line) cells.**

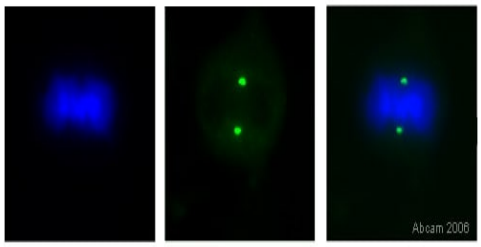
The top panel is an interphase cell showing centrosome staining.

The bottom panel shows a mitotic cell with spindle pole staining.

ab4448 was used at 1/500, but also works at higher dilutions (1/1000-1/2000).

Top panel - 630X magnification; Bottom panel -1000X magnification.

The secondary antibody was Alexa-Fluor®488 anti-rabbit.




Immunocytochemistry/ Immunofluorescence - Anti-Pericentrin antibody - Centrosome Marker (ab4448)

This image is courtesy of Roberto Giambruno, Marilena Ciciarello and Patrizia Lavia

NIH/3T3 (Mouse embryo fibroblast cell line) cells were fixed in 100% methanol for 6 minutes at -20°C, washed 3 times in PBS then incubated with ab4448 (1/2000) for 1 hour at room temperature.

The panel of images shows the nuclei stained with DAPI (blue), ab4448 staining is shown in green. 100x magnification.



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