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PCM-1 Antibody (Center)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP7481C

Product Information

Application	WB, IHC-P, FC, IF, E
Primary Accession	Q15154
Reactivity	Human
Predicted	Mouse, Rat, Canine, Rabbit
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB18191
Calculated MW	228560
Antigen Region	632-661

Additional Information

Gene ID	5108
Other Names	Pericentriolar material 1 protein, PCM-1, hPCM-1, PCM1
Target/Specificity	This PCM-1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 632-661 amino acids from the Central region of human PCM-1.
Dilution	WB~~1:1000 IHC-P~~1:100~500 FC~~1:10~50 IF~~1:10~50 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	PCM-1 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	PCM1 (HGNC:8727)
Function	Required for centrosome assembly and function (PubMed: 12403812, PubMed:15659651, PubMed:16943179). Essential for the correct localization of several centrosomal proteins including CEP250, CETN3, PCNT and NEK2

(PubMed:12403812, PubMed:15659651). Required to anchor microtubules to the centrosome (PubMed:12403812, PubMed:15659651). Also involved in cilium biogenesis by recruiting the BBSome, a ciliary protein complex involved in cilium biogenesis, to the centriolar satellites (PubMed:20551181, PubMed:24121310, PubMed:27979967). Recruits the tubulin polyglutamylase complex (TPGC) to centriolar satellites (PubMed:34782749).

Cellular Location

Cytoplasm, cytoskeleton {ECO:0000250|UniProtKB:Q8AV28}. Cytoplasm, cytoskeleton, microtubule organizing center, centrosome. Cytoplasmic granule. Cytoplasm, cytoskeleton, microtubule organizing center, centrosome, centriolar satellite. Cytoplasm, cytoskeleton, cilium basal body. Note=Recruitment to the centrosome requires microtubules and dynein. The majority of the protein dissociates from the centrosome during metaphase and subsequently localizes to the cleavage site in telophase. Displaced from centriolar satellites and centrosome in response to cellular stress, such as ultraviolet light (UV) radiation or heat shock, in a process that requires p38 MAP kinase signaling

Tissue Location

Expressed in blood, bone marrow, breast, lymph node, ovary and thyroid.

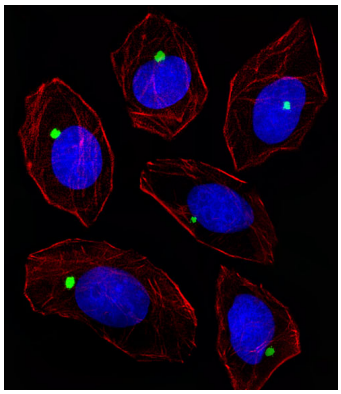
Background

PCM-1 is required for centrosome assembly and function. This protein is essential for the correct localization of several centrosomal proteins including CEP250, CETN3, PCNT and NEK2. The protein is required to anchor microtubules to the centrosome.

References

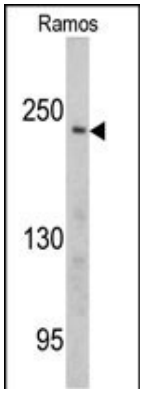
Balczon R., Bao L.J. Cell Biol. 124:783-793(1994)
Corvi R., Berger N.Oncogene 19:4236-4242(2000)
Dammermann A., Merdes A.J. Cell Biol. 159:255-266(2002)
Reiter A., Walz C.Cancer Res. 65:2662-2667(2005)
Murati A., Gelsi-Boyer V.Leukemia 19:1692-1696(2005)
Hames R.S., Crookes R.E.Mol. Biol. Cell 16:1711-1724(2005)

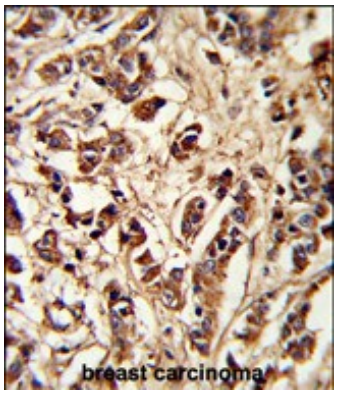
Images



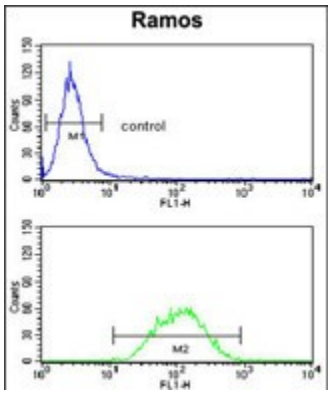
Fluorescent image of A549 cell stained with PCM-1 Antibody (Center)(Cat#AP7481c/SA120711BC).A549 cells were fixed with 4% PFA (20 min), permeabilized with Triton X-100 (0.1%, 10 min), then incubated with PCM-1 primary antibody (1:25, 1 h at 37°C). For secondary antibody, Alexa Fluor® 488 conjugated donkey anti-rabbit antibody (green) was used (1:400, 50 min at 37°C).Cytoplasmic actin was counterstained with Alexa Fluor® 555 (red) conjugated Phalloidin (7units/ml, 1 h at 37°C). Nuclei were counterstained with DAPI (blue) (10 µg/ml, 10 min).PCM-1 immunoreactivity is localized to Centrosome significantly.

Western blot analysis of PCM-1 antibody (Center)(Cat.#AP7481c) in Ramos cell line lysates (35ug/lane). PCM-1 (arrow) was detected using the purified Pab.





Formalin-fixed and paraffin-embedded human breast carcinoma reacted with PCM-1 Antibody (Center), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.



PCM-1 Antibody (Center) (Cat. #AP7481c) flow cytometry analysis of Ramos cells (bottom histogram) compared to a negative control cell (top histogram).FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

Citations

- Centlein mediates an interaction between C-Nap1 and Cep68 to maintain centrosome cohesion.

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