

# PKN1 Antibody (C-Term)

Purified Rabbit Polyclonal Antibody (Pab)

Catalog # AP22237b

## Product Information

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<b>Application</b>	WB, FC, IF, IHC-P, E
<b>Primary Accession</b>	<a href="#">Q16512</a>
<b>Other Accession</b>	<a href="#">A1A4I4</a> , <a href="#">A1Z7T0</a>
<b>Reactivity</b>	Human, Rat, Mouse
<b>Predicted</b>	Bovine
<b>Host</b>	Rabbit
<b>Clonality</b>	polyclonal
<b>Isotype</b>	Rabbit IgG
<b>Clone Names</b>	RB56692
<b>Calculated MW</b>	103932

## Additional Information

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<b>Gene ID</b>	5585
<b>Other Names</b>	Serine/threonine-protein kinase N1, 2.7.11.13, Protease-activated kinase 1, PAK-1, Protein kinase C-like 1, Protein kinase C-like PKN, Protein kinase PKN-alpha, Protein-kinase C-related kinase 1, Serine-threonine protein kinase N, PKN1, PAK1, PKN, PRK1, PRKCL1
<b>Target/Specificity</b>	This PKN1 antibody is generated from a rabbit immunized with a KLH conjugated synthetic peptide between 836-870 amino acids from human PKN1.
<b>Dilution</b>	WB~~1:2000 FC~~1:25 IF~~1:25 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
<b>Format</b>	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
<b>Storage</b>	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.
<b>Precautions</b>	PKN1 Antibody (C-Term) is for research use only and not for use in diagnostic or therapeutic procedures.

## Protein Information

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<b>Name</b>	PKN1
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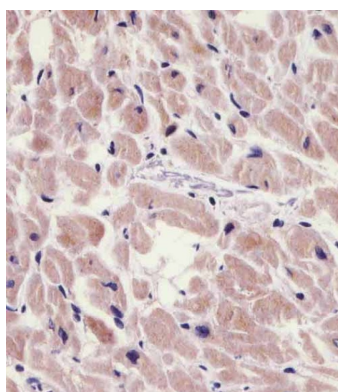
<b>Synonyms</b>	PAK1, PKN, PRK1, PRKCL1
<b>Function</b>	PKC-related serine/threonine-protein kinase involved in various processes such as regulation of the intermediate filaments of the actin cytoskeleton, cell migration, tumor cell invasion and transcription regulation. Part of a signaling cascade that begins with the activation of the adrenergic receptor ADRA1B and leads to the activation of MAPK14. Regulates the cytoskeletal network by phosphorylating proteins such as VIM and neurofilament proteins NEFH, NEFL and NEFM, leading to inhibit their polymerization. Phosphorylates 'Ser-575', 'Ser-637' and 'Ser-669' of MAPT/Tau, lowering its ability to bind to microtubules, resulting in disruption of tubulin assembly. Acts as a key coactivator of androgen receptor (AR)-dependent transcription, by being recruited to AR target genes and specifically mediating phosphorylation of 'Thr-11' of histone H3 (H3T11ph), a specific tag for epigenetic transcriptional activation that promotes demethylation of histone H3 'Lys-9' (H3K9me) by KDM4C/JMJD2C. Phosphorylates HDAC5, HDAC7 and HDAC9, leading to impair their import in the nucleus. Phosphorylates 'Thr-38' of PPP1R14A, 'Ser-159', 'Ser-163' and 'Ser-170' of MARCKS, and GFAP. Able to phosphorylate RPS6 in vitro.
<b>Cellular Location</b>	Cytoplasm. Nucleus Endosome. Cell membrane {ECO:0000250 UniProtKB:Q63433}; Peripheral membrane protein {ECO:0000250 UniProtKB:Q63433}. Cleavage furrow. Midbody Note=Associates with chromatin in a ligand-dependent manner Localization to endosomes is mediated via its interaction with RHOB Association to the cell membrane is dependent on Ser-377 phosphorylation. Accumulates during telophase at the cleavage furrow and finally concentrates around the midbody in cytokinesis {ECO:0000250 UniProtKB:Q63433, ECO:0000269 PubMed:17332740}
<b>Tissue Location</b>	Found ubiquitously. Expressed in heart, brain, placenta, lung, skeletal muscle, kidney and pancreas. Expressed in numerous tumor cell lines, especially in breast tumor cells

## Background

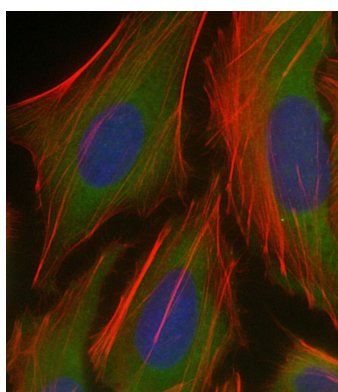
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## References

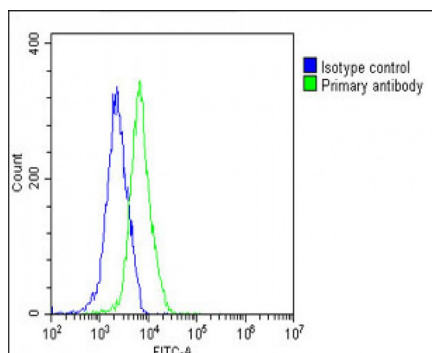
- Mukai H.,et al.Biochem. Biophys. Res. Commun. 199:897-904(1994).  
Palmer R.H.,et al.Eur. J. Biochem. 227:344-351(1995).  
Ota T.,et al.Nat. Genet. 36:40-45(2004).  
Grimwood J.,et al.Nature 428:529-535(2004).  
Palmer R.H.,et al.FEBS Lett. 356:5-8(1994).



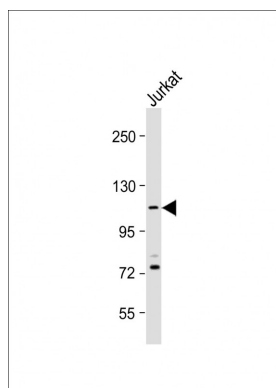
AP22237b staining PKN1 in human heart tissue sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Tissue was fixed with formaldehyde and blocked with 3% BSA for 0.5 hour at room temperature; antigen retrieval was by heat mediation with a citrate buffer (pH6). Samples were incubated with primary antibody (1/25) for 1 hour at 37°C. A undiluted biotinylated goat polyvalent antibody was used as the secondary antibody.



Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized HeLa (human cervical epithelial adenocarcinoma cell line) cells labeling PKN1 with AP22237b at 1/25 dilution, followed by DyLight® 488-conjugated goat anti-rabbit IgG (NK179883) secondary antibody at 1/200 dilution (green). Immunofluorescence image showing cytoplasm and nucleus staining on HeLa cell line. Cytoplasmic actin is detected with DyLight® 554 Phalloidin (PD18466410) at 1/100 dilution (red). The nuclear counter stain is DAPI (blue).



Overlay histogram showing HeLa cells stained with AP22237b (green line). The cells were fixed with 2% paraformaldehyde (10 min) and then permeabilized with 90% methanol for 10 min. The cells were then incubated in 2% bovine serum albumin to block non-specific protein-protein interactions followed by the antibody (AP22237b, 1:25 dilution) for 60 min at 37°C. The secondary antibody used was Goat-Anti-Rabbit IgG, DyLight® 488 Conjugated Highly Cross-Adsorbed (OE188374) at 1/200 dilution for 40 min at 37°C. Isotype control antibody (blue line) was rabbit IgG1 (1 µg/1x10<sup>6</sup> cells) used under the same conditions. Acquisition of >10,000 events was performed.



Anti-PKN1 Antibody (C-Term) at 1:2000 dilution + Jurkat whole cell lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 104 kDa Blocking/Dilution buffer: 5% NFDM/TBST.