

**PIN1 Antibody**  
**Mouse Monoclonal Antibody (Mab)**  
**Catalog # AW5186****Specification**

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**PIN1 Antibody - Product Information**

Application	WB, IHC-P, IHC, FC,E
Primary Accession	<a href="#">Q13526</a>
Reactivity	Human, Mouse
Predicted	Rat
Host	Mouse
Clonality	Monoclonal
Calculated MW	H=18;M=18;Rat=18 KDa
Isotype	IgG1
Antigen Source	Human

**PIN1 Antibody - Additional Information****Gene ID** 5300**Antigen Region**  
1-143**Other Names**

PIN1;Peptidyl-prolyl cis-trans isomerase NIMA-interacting 1; Peptidyl-prolyl cis-trans isomerase NIMA-interacting 1; Peptidyl-prolyl cis-trans isomerase Pin1; Peptidyl-prolyl cis-trans isomerase NIMA-interacting 1; Rotamase Pin1

**Dilution**

WB~~1:2000  
IHC-P~~1:25  
IHC~~1:25  
FC~~1:25

**Target/Specificity**

Purified His-tagged PIN1 protein was used to produced this monoclonal antibody.

**Format**

Purified monoclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein G column, 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**

PIN1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

**PIN1 Antibody - Protein Information**

## Name PIN1

### Function

Peptidyl-prolyl cis/trans isomerase (PPIase) that binds to and isomerizes specific phosphorylated Ser/Thr-Pro (pSer/Thr-Pro) motifs (PubMed:<a href="http://www.uniprot.org/citations/21497122" target="\_blank">21497122</a>, PubMed:<a href="http://www.uniprot.org/citations/23623683" target="\_blank">23623683</a>, PubMed:<a href="http://www.uniprot.org/citations/29686383" target="\_blank">29686383</a>). By inducing conformational changes in a subset of phosphorylated proteins, acts as a molecular switch in multiple cellular processes (PubMed:<a href="http://www.uniprot.org/citations/21497122" target="\_blank">21497122</a>, PubMed:<a href="http://www.uniprot.org/citations/22033920" target="\_blank">22033920</a>, PubMed:<a href="http://www.uniprot.org/citations/23623683" target="\_blank">23623683</a>). Displays a preference for acidic residues located N-terminally to the proline bond to be isomerized. Regulates mitosis presumably by interacting with NIMA and attenuating its mitosis-promoting activity. Down-regulates kinase activity of BTK (PubMed:<a href="http://www.uniprot.org/citations/16644721" target="\_blank">16644721</a>). Can transactivate multiple oncogenes and induce centrosome amplification, chromosome instability and cell transformation. Required for the efficient dephosphorylation and recycling of RAF1 after mitogen activation (PubMed:<a href="http://www.uniprot.org/citations/15664191" target="\_blank">15664191</a>). Binds and targets PML and BCL6 for degradation in a phosphorylation-dependent manner (PubMed:<a href="http://www.uniprot.org/citations/17828269" target="\_blank">17828269</a>). Acts as a regulator of JNK cascade by binding to phosphorylated FBXW7, disrupting FBXW7 dimerization and promoting FBXW7 autoubiquitination and degradation: degradation of FBXW7 leads to subsequent stabilization of JUN (PubMed:<a href="http://www.uniprot.org/citations/22608923" target="\_blank">22608923</a>). May facilitate the ubiquitination and proteasomal degradation of RBBP8/CtIP through CUL3/KLHL15 E3 ubiquitin-protein ligase complex, hence favors DNA double-strand repair through error-prone non-homologous end joining (NHEJ) over error-free, RBBP8-mediated homologous recombination (HR) (PubMed:<a href="http://www.uniprot.org/citations/23623683" target="\_blank">23623683</a>, PubMed:<a href="http://www.uniprot.org/citations/27561354" target="\_blank">27561354</a>). Upon IL33-induced lung inflammation, catalyzes cis-trans isomerization of phosphorylated IRAK3/IRAK-M, inducing IRAK3 stabilization, nuclear translocation and expression of pro-inflammatory genes in dendritic cells (PubMed:<a href="http://www.uniprot.org/citations/29686383" target="\_blank">29686383</a>). Catalyzes cis-trans isomerization of phosphorylated phosphoglycerate kinase PGK1 under hypoxic conditions to promote its binding to the TOM complex and targeting to the mitochondrion (PubMed:<a href="http://www.uniprot.org/citations/26942675" target="\_blank">26942675</a>).

### Cellular Location

Nucleus. Nucleus speckle. Cytoplasm Note=Colocalizes with NEK6 in the nucleus (PubMed:16476580). Mainly localized in the nucleus but phosphorylation at Ser-71 by DAPK1 results in inhibition of its nuclear localization (PubMed:21497122)

### Tissue Location

Expressed in immune cells in the lung (at protein level) (PubMed:29686383). The phosphorylated form at Ser-71 is expressed in normal breast tissue cells but not in breast cancer cells

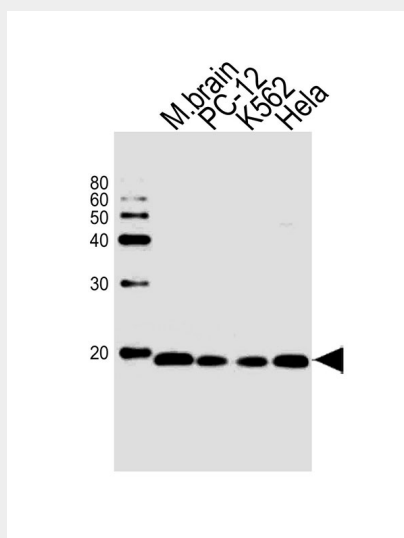
## PIN1 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

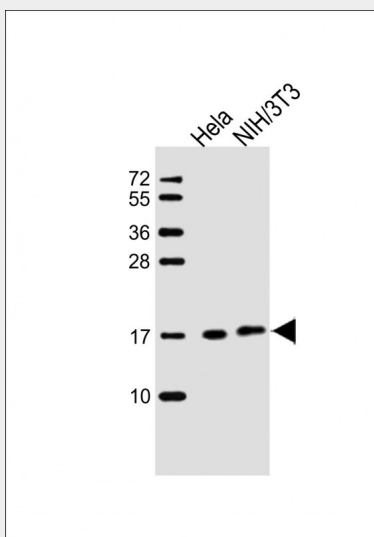
- [Western Blot](#)
- [Blocking Peptides](#)

- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

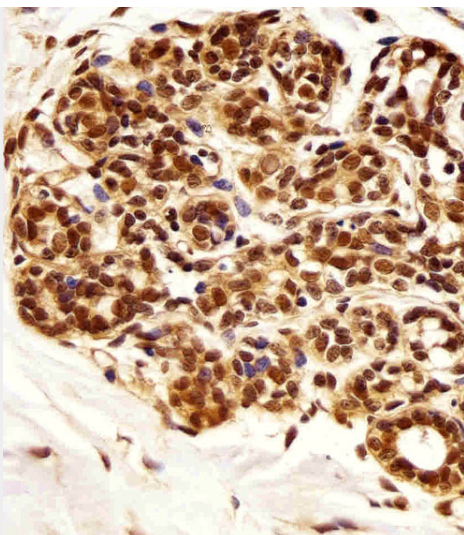
## PIN1 Antibody - Images



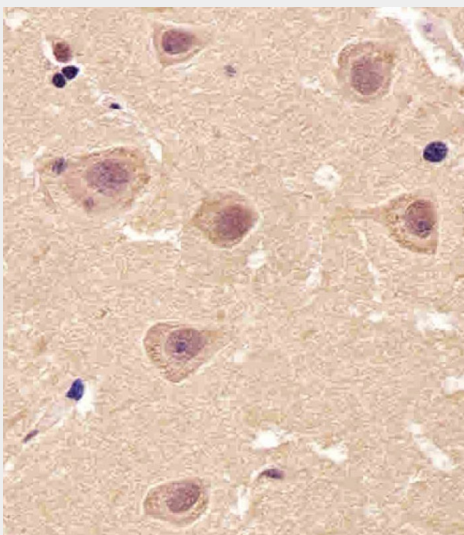
Western blot analysis of lysates from M.brain tissue, rat PC-12, K562, HeLa cell line (from left to right), using PIN1 Antibody (Cat. #AW5186). AW5186 was diluted at 1:1000 at each lane. A goat anti-mouse IgG H&L (HRP) at 1:10000 dilution was used as the secondary antibody. Lysates at 20 µg per lane.



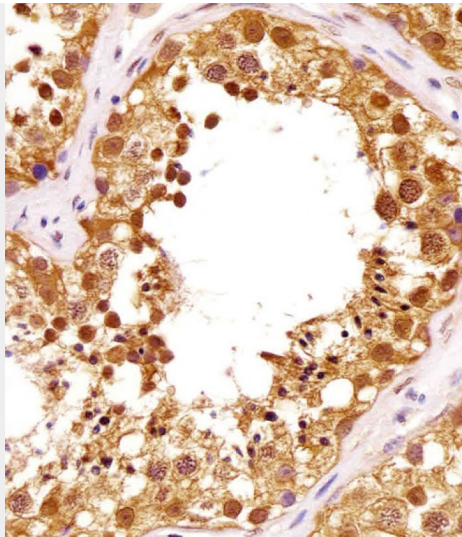
All lanes : Anti-PIN1 at 1:2000 dilution Lane 1: HeLa whole cell lysate Lane 2: NIH/3T3 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-mouse IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 18 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



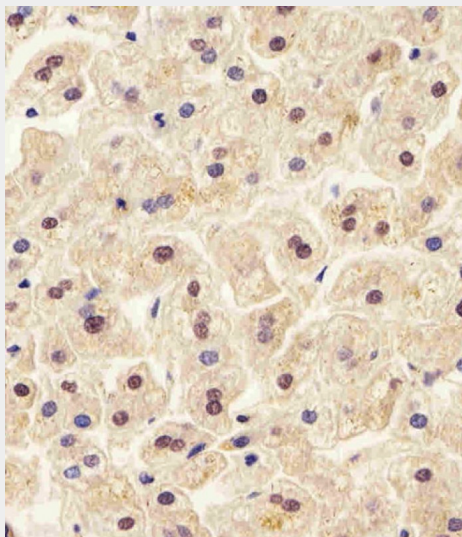
Immunohistochemical analysis of paraffin-embedded H. breast section using PIN1 Antibody (Cat#AW5186). AW5186 was diluted at 1:25 dilution. A undiluted biotinylated goat polyvalent antibody was used as the secondary, followed by DAB staining.



AW5186 staining PIN1 in human brain 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.

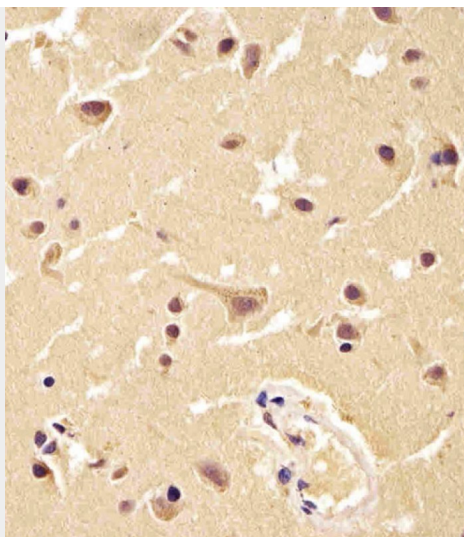


AW5186 staining PIN1 in human testis tissue sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Tissue was fixed with formaldehyde and blocked with 3% BSA for 0.5 hour at room temperature; antigen retrieval was by heat mediation with a citrate buffer (pH6). 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.

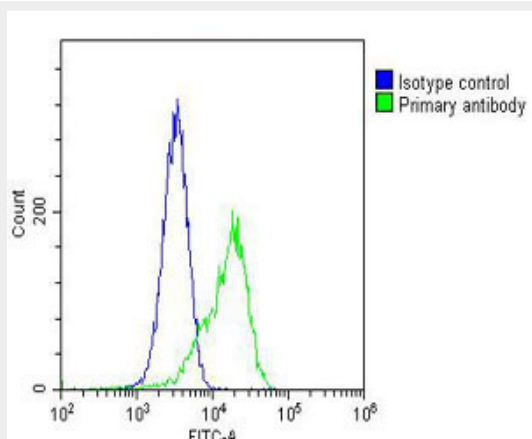


AW5186 staining PIN1 in human liver tissue sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Tissue was fixed with formaldehyde and blocked with 3% BSA for 0.5 hour at room temperature; antigen retrieval was by heat mediation with a citrate buffer (pH6). Samples 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.





AW5186 staining PIN1 in human brain 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.



Overlay histogram showing Hela cells stained with AW5649 (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 (AW5649, 1:25 dilution) for 60 min at 37°C. The secondary antibody used was Goat-Anti-Mouse IgG, DyLight® 488 Conjugated Highly Cross-Adsorbed (OJ192088) at 1/200 dilution for 40 min at 37°C. Isotype control antibody (blue line) was mouse IgG1 (1 µg/1x10<sup>6</sup> cells) used under the same conditions. Acquisition of >10,000 events was performed.

### **PIN1 Antibody - Background**

Essential PPIase that regulates mitosis presumably by interacting with NIMA and attenuating its mitosis-promoting activity. Displays a preference for an acidic residue N-terminal to the isomerized proline bond. Catalyzes pSer/Thr-Pro cis/trans isomerizations. Down-regulates kinase activity of BTK. Can transactivate multiple oncogenes and induce centrosome amplification, chromosome instability and cell transformation. Required for the efficient dephosphorylation and recycling of RAF1 after mitogen activation.

### **PIN1 Antibody - References**

Ebert L., et al. Submitted (MAY-2004) to the EMBL/GenBank/DDBJ databases.  
Lu K.P., et al. Nature 380:544-547(1996).  
Kalnine N., et al. Submitted (OCT-2004) to the EMBL/GenBank/DDBJ databases.  
Ota T., et al. Nat. Genet. 36:40-45(2004).  
Mural R.J., et al. Submitted (JUL-2005) to the EMBL/GenBank/DDBJ databases.