

**PIN1 Antibody**  
**Mouse Monoclonal Antibody (Mab)**  
**Catalog # AM2212B**

**Specification**

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**PIN1 Antibody - Product Information**

Application	WB, IHC-P,E
Primary Accession	<a href="#">Q13526</a>
Reactivity	Human, Mouse, Rat, Green Monkey
Host	Mouse
Clonality	Monoclonal
Isotype	IgG1
Calculated MW	18243

**PIN1 Antibody - Additional Information**

**Gene ID** 5300

**Other Names**

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

**Target/Specificity**

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

**Dilution**

WB~~1:1000

IHC-P~~1:25

**Format**

Purified monoclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein G column, eluted with high and low pH buffers and neutralized immediately, 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:[21497122](#), PubMed:[23623683](#), PubMed:[29686383](#)). By inducing conformational changes in a subset of phosphorylated proteins,

acts as a molecular switch in multiple cellular processes (PubMed:[21497122](#), PubMed:[22033920](#), PubMed:[23623683](#)). 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:[16644721](#)). 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:[15664191](#)). Binds and targets PML and BCL6 for degradation in a phosphorylation-dependent manner (PubMed:[17828269](#)). 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:[22608923](#)). 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:[23623683](#), PubMed:[27561354](#)). 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:[29686383](#)). 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:[26942675](#)).

#### 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

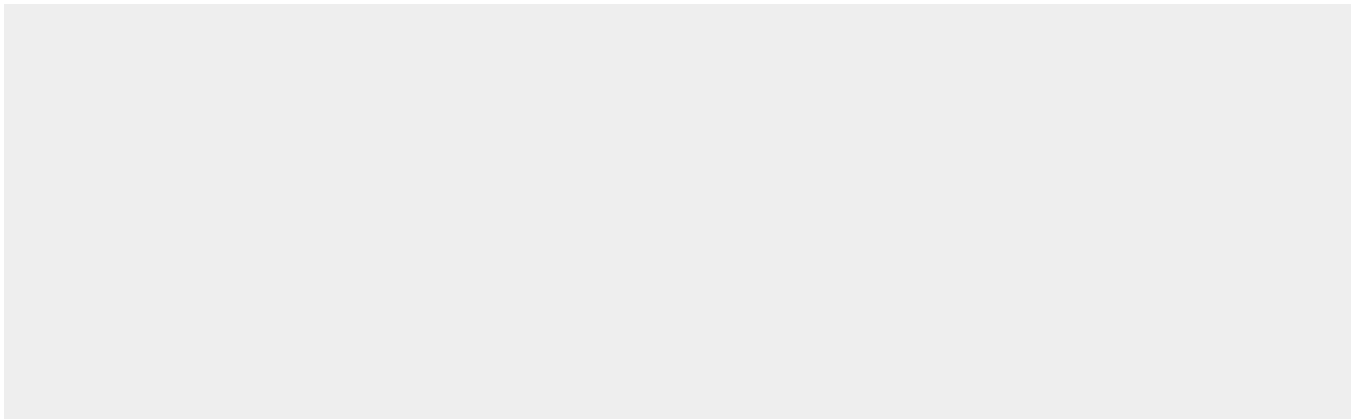
Expressed in immune cells in the lung (at protein level) (PubMed:29686383). The phosphorylated form at Ser-71 is expressed in normal breast tissue cells but not in breast cancer cells

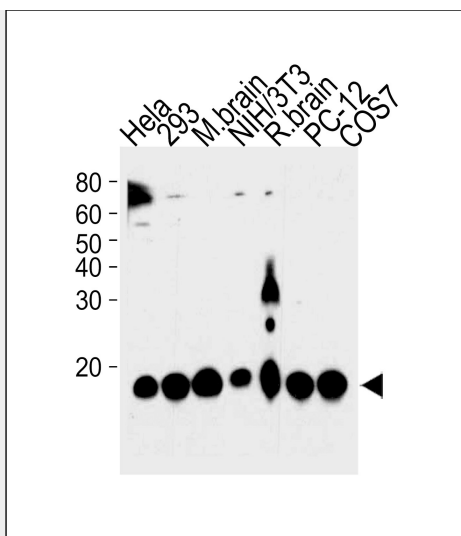
#### PIN1 Antibody - Protocols

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

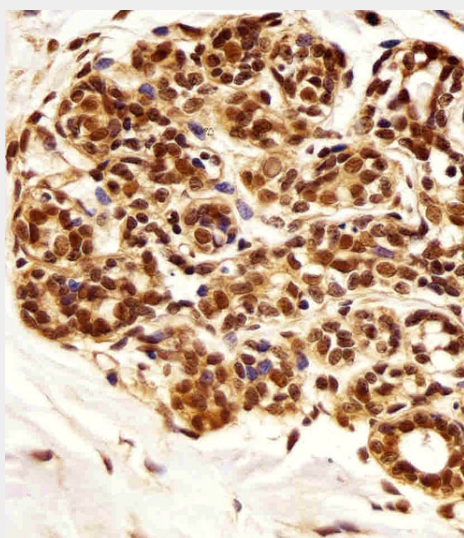
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

#### PIN1 Antibody - Images





PIN1 Antibody (Cat. #AM2212b) western blot analysis in HeLa,293,mouse NIH/3T3,PC-12,COS-7 cell line and mouse brain,rat brain tissue lysates (35µg/lane).This demonstrates the PIN1 antibody detected the PIN1 protein (arrow).



Immunohistochemical analysis of paraffin-embedded H. breast section using PIN1 Antibody(Cat#AM2212B). AM2212B was diluted at 1:25 dilution. A undiluted biotinylated goat polyvalent antibody was used as the secondary, followed by DAB staining.

### **PIN1 Antibody - Background**

Essential PPlase 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.

**PIN1 Antibody - Citations**

- [Hyperthermia depletes Oct4 in mouse blastocysts and stem cells.](#)
- [RACK1 Promotes Self-Renewal and Chemoresistance of Cancer Stem Cells in Human Hepatocellular Carcinoma through Stabilizing Nanog.](#)
- [Knockdown of the prolyl isomerase Pin1 inhibits Hep-2 cells growth, migration and invasion by targeting  \$\beta\$ -catenin signaling pathway.](#)