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PIN1 Antibody
Mouse Monoclonal Antibody (Mab)
Catalog # AM2212B

Specification

PIN1 Antibody - Product Information

Application	**WB, IHC-P,E**
Primary Accession	Q13526
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
E~~Use at an assay dependent concentration.

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 Cytomety
- Cell Culture

PIN1 Antibody - Images

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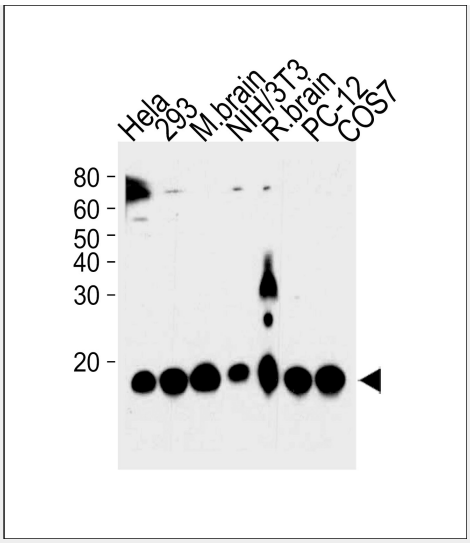
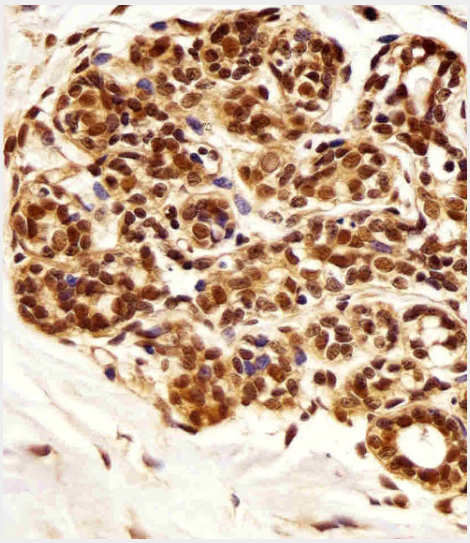


PIN1 Antibody (Cat. #AM2212b) western blot analysis in Hela,293,mouse NIH/3T3,PC-12,COS-7 cell line and mouse brain,rat brain tissue lysates (35µg/lane).This demonstrates the PIN1 antibody detected the PIN1 protein (arrow).



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 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.

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 β-catenin signaling pathway.