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Pin1 Rabbit mAb

Catalog # AP75913

Product Information

Application	WB, IHC-P, FC, IP
Primary Accession	Q13526
Reactivity	Rat, Human, Mouse
Host	Rabbit
Clonality	Monoclonal Antibody
Isotype	IgG
Conjugate	Unconjugated
Purification	Affinity Purified
Calculated MW	18243

Additional Information

Gene ID	5300
Other Names	PIN1
Dilution	WB~~1:500-1:1000 IHC-P~~N/A FC~~1:200-1:500 IP~~1:20-1:50
Format	Liquid in 50mM Tris-Glycine(pH 7.4), 0.15M NaCl, 40%Glycerol, 0.01% sodium azide and 0.05% BSA.
Storage	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.

Protein Information

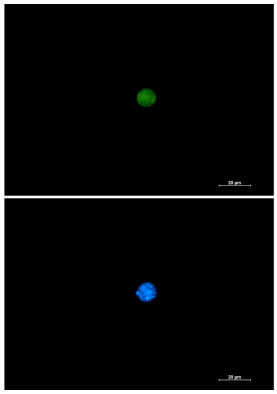
Name	PIN1
Function	Peptidyl-prolyl cis/trans isomerase (PPIase) that binds to and isomerizes specific phosphorylated Ser/Thr-Pro (pSer/Thr-Pro) motifs (PubMed:21497122, PubMed:23623683, PubMed:29686383). By inducing conformational changes in a subset of phosphorylated proteins, acts as a molecular switch 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). Acts as a negative regulator of adipocyte browning by binding to phosphorylated PRDM16, targeting PRDM16 for degradation (By similarity).
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

Background

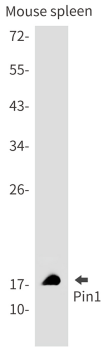
Peptidyl-prolyl cis/trans isomerases (PPIases) catalyze the cis/trans isomerization of peptidyl-prolyl peptide bonds. This gene encodes one of the PPIases, which specifically binds to phosphorylated ser/thr-pro motifs to catalytically regulate the post-phosphorylation conformation of its substrates. The conformational regulation catalyzed by this PPIase has a profound impact on key proteins involved in the regulation of cell growth, genotoxic and other stress responses, the immune response, induction and maintenance of pluripotency, germ cell development, neuronal differentiation, and survival.

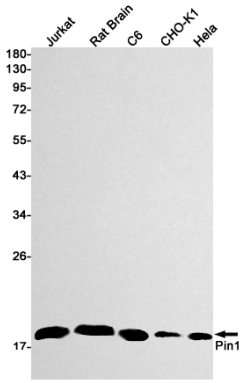
Images



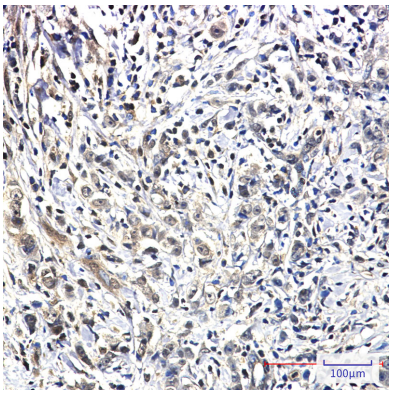
Immunocytochemistry analysis of PIN1 (green) in 293 using PIN1 antibody,and DAPI(blue).

Western blot analysis of Pin1 in mouse spleen lysates using Pin1 antibody.

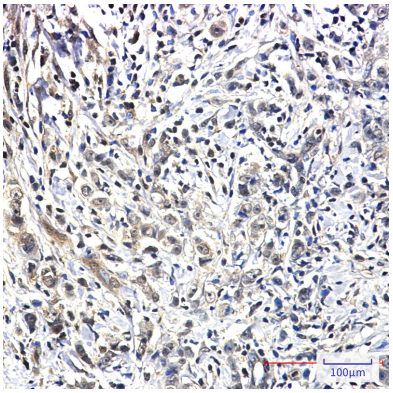




Western blot analysis of Pin1 in Jurkat, rat Brain, C6, CHO-K1, Hela lysates using Pin1 antibody



Immunohistochemistry analysis of paraffin-embedded Human breast cancer using Pin1 antibody.High-pressure and temperature Sodium Citrate pH 6.0 was used for antigen retrieval.



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