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Anti-Pin1 Picoband Antibody

Catalog # ABO12007

Product Information

Application	WB
Primary Accession	Q13526
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized
Description	Rabbit IgG polyclonal antibody for Peptidyl-prolyl cis-trans isomerase NIMA-interacting 1(PIN1) detection. Tested with WB in Human;Mouse;Rat.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Additional Information

Gene ID	5300
Other Names	Peptidyl-prolyl cis-trans isomerase NIMA-interacting 1, 5.2.1.8, Peptidyl-prolyl cis-trans isomerase Pin1, PPIase Pin1, Rotamase Pin1, PIN1
Calculated MW	18243
Application Details	Western blot, 0.1-0.5 □g/ml, Human, Mouse, Rat
Subcellular Localization	Nucleus . Nucleus speckle . Cytoplasm . 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 Specificity	The phosphorylated form at Ser-71 is expressed in normal breast tissue cells but not in breast cancer cells. .
Source	Eukaryota
Protein Name	Peptidyl-prolyl cis-trans isomerase NIMA-interacting 1
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.
Immunogen	E.coli-derived human Pin1 recombinant protein (Position: M1-E163). Human Pin1 shares 95% amino acid (aa) sequence identity with mouse Pin1.
Purification	Immunogen affinity purified.
Cross Reactivity	No cross reactivity with other proteins

Storage	At -20˚C for one year. After r˚Constitution, at 4˚C for one month. It˚Can also be aliquotted and stored frozen at -20˚C for a longer time.Avoid repeated freezing and thawing.
Sequence Similarities	Contains 1 PpiC domain.

Protein Information

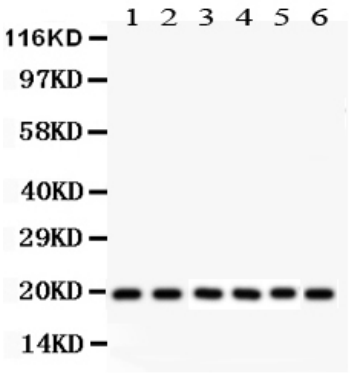
Name	PIN1
Function	Peptidyl-prolyl cis/trans isomerase (PPIase) that binds to and isomerizes specific phosphorylated Ser/Thr-Pro (pSer/Thr-Pro) motifs (PubMed:21497122, PubMed:23623683, PubMed:29686383). By inducing conformational changes in a subset of phosphorylated proteins, acts as a molecular switch 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 isomerase NIMA-interacting 1, also called DOD, is an enzyme that in humans is encoded by the PIN1 gene. It is mapped to 19p13.2. The enzyme binds to a subset of proteins and thus plays a role as a post phospho PIN1rol in regulating protein function. Studies have shown that the deregulation of PIN1 may play a pivotal role in various diseases. Notably, the up-regulation of PIN1 may be implicated in certain cancers, and the down-regulation of Pin1 may be implicated in Alzheimer's disease. Inhibitors of

PIN1 may have therapeutic implications for cancer and immune disorders. PIN1 activity regulates the outcome of proline-directed kinase (e.g. MAPK, CDK or GSK3) signalling and consequently regulates cell proliferation (in part through control of cyclin D1 levels and stability) and cell survival. PIN1 also has an essential role in maintaining cell proliferation and regulating cyclin D1 function.

Images



Anti- PIN1 Picoband antibody, ABO12007, Western blottingAll lanes: Anti PIN1 (ABO12007) at 0.5ug/mlLane 1: Rat Lung Tissue Lysate at 50ugLane 2: Mouse Lung Tissue Lysate at 50ugLane 3: NRK Whole Cell Lysate at 40ugLane 4: A549 Whole Cell Lysate at 40ugLane 5: 293T Whole Cell Lysate at 40ugLane 6: MCF-7 Whole Cell Lysate at 40ugPredicted bind size: 19KDObserved bind size: 19KD

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