

Goat Anti-PIN1 Antibody
Peptide-affinity purified goat antibody
Catalog # AF1829a

Specification

Goat Anti-PIN1 Antibody - Product Information

Application	WB
Primary Accession	Q13526
Other Accession	NP_006212 , 5300 , 23988 (mouse) , 298696 (rat)
Reactivity	Rat
Predicted	Human, Mouse, Dog
Host	Goat
Clonality	Polyclonal
Concentration	100ug/200ul
Isotype	IgG
Calculated MW	18243

Goat Anti-PIN1 Antibody - 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, PPlase Pin1, Rotamase Pin1, PIN1

Format

0.5 mg IgG/ml in Tris saline (20mM Tris pH7.3, 150mM NaCl), 0.02% sodium azide, with 0.5% bovine serum albumin

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

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

Goat Anti-PIN1 Antibody - Protein Information

Name PIN1

Function

Peptidyl-prolyl cis/trans isomerase (PPlase) that binds to and isomerizes specific phosphorylated Ser/Thr-Pro (pSer/Thr-Pro) motifs (PubMed: [21497122](http://www.uniprot.org/citations/21497122), PubMed: [23623683](http://www.uniprot.org/citations/23623683), PubMed: [29686383](http://www.uniprot.org/citations/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).

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

Goat Anti-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](#)

Goat Anti-PIN1 Antibody - Images





AF1829a (0.2 $\mu\text{g/ml}$) staining of Rat Brain lysate (35 μg protein in RIPA buffer). Primary incubation was 1 hour. Detected by chemiluminescence.

Goat Anti-PIN1 Antibody - Background

Peptidyl-prolyl cis/trans isomerases (PPIases; EC 5.2.1.8), such as PIN1, catalyze the cis/trans isomerization of peptidyl-prolyl peptide bonds. PIN1 is the only PPIase that specifically binds to phosphorylated ser/thr-pro motifs to catalytically regulate the post-phosphorylation conformation of its substrates. PIN1-catalyzed conformational regulation has a profound impact on key proteins involved in the regulation of cell growth, genotoxic and other stress responses, the immune response, germ cell development, neuronal differentiation, and survival (review by Lu and Zhou, 2007 [PubMed 17878917]).

Goat Anti-PIN1 Antibody - References

A PIN1 polymorphism that prevents its suppression by AP4 associates with delayed onset of Alzheimer's disease. Ma SL, et al. *Neurobiol Aging*, 2010 Jun 24. PMID 20580132.
Uncoating of human immunodeficiency virus type 1 requires prolyl isomerase Pin1. Misumi S, et al. *J Biol Chem*, 2010 Aug 13. PMID 20529865.
The prolyl isomerase Pin1 induces LC-3 expression and mediates tamoxifen resistance in breast cancer. Namgoong GM, et al. *J Biol Chem*, 2010 Jul 30. PMID 20479004.
Elevated PIN1 expression by C/EBPalpha-p30 blocks C/EBPalpha-induced granulocytic differentiation through c-Jun in AML. Pulikkan JA, et al. *Leukemia*, 2010 May. PMID 20376080.
Membrane permeable cyclic peptidyl inhibitors against human Peptidylprolyl Isomerase Pin1. Liu T, et al. *J Med Chem*, 2010 Mar 25. PMID 20180533.