

# HINT1 Antibody

Purified Mouse Monoclonal Antibody (Mab)

Catalog # AM8470b

## Product Information

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<b>Application</b>	WB, FC, IHC-P, IF, E
<b>Primary Accession</b>	<a href="#">P49773</a>
<b>Reactivity</b>	Human, Mouse, Rat
<b>Host</b>	Mouse
<b>Clonality</b>	monoclonal
<b>Isotype</b>	IgG1,k
<b>Clone Names</b>	1500CT836.13.93
<b>Calculated MW</b>	13802

## Additional Information

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<b>Gene ID</b>	3094
<b>Other Names</b>	Histidine triad nucleotide-binding protein 1, 3---, Adenosine 5'-monophosphoramidase, Protein kinase C inhibitor 1, Protein kinase C-interacting protein 1, PKCI-1, HINT1, HINT, PKCI1, PRKCNH1
<b>Target/Specificity</b>	This HINT1 antibody is generated from a mouse immunized with a recombinant protein of human HINT1.
<b>Dilution</b>	WB~~1:1000 FC~~1:25 IHC-P~~1:100~500 IF~~1:25 E~~Use at an assay dependent concentration.
<b>Format</b>	Purified monoclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein G column, followed by dialysis against PBS.
<b>Storage</b>	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.
<b>Precautions</b>	HINT1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

## Protein Information

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<b>Name</b>	HINT1
<b>Synonyms</b>	HINT, PKCI1, PRKCNH1
<b>Function</b>	Exhibits adenosine 5'-monophosphoramidase activity, hydrolyzing purine nucleotide phosphoramidates with a single phosphate group such as

adenosine 5'monophosphoramidate (AMP-NH<sub>2</sub>) to yield AMP and NH<sub>2</sub> (PubMed:[15703176](#), PubMed:[16835243](#), PubMed:[17217311](#), PubMed:[17337452](#), PubMed:[22329685](#), PubMed:[23614568](#), PubMed:[28691797](#), PubMed:[29787766](#), PubMed:[31990367](#)). Hydrolyzes adenosine 5'monophosphomorpholidate (AMP-morpholidate) and guanosine 5'monophosphomorpholidate (GMP-morpholidate) (PubMed:[15703176](#), PubMed:[16835243](#)). Hydrolyzes lysyl-AMP (AMP-N-epsilon-(N-alpha-acetyl lysine methyl ester)) generated by lysine tRNA ligase, as well as Met- AMP, His-AMP and Asp-AMP, lysyl-GMP (GMP-N-epsilon-(N-alpha-acetyl lysine methyl ester)) and AMP-N-alanine methyl ester (PubMed:[15703176](#), PubMed:[17337452](#), PubMed:[22329685](#)). Hydrolyzes 3-indolepropionic acyl-adenylate, tryptamine adenosine phosphoramidate monoester and other fluorogenic purine nucleoside tryptamine phosphoramidates in vitro (PubMed:[17217311](#), PubMed:[17337452](#), PubMed:[23614568](#), PubMed:[28691797](#), PubMed:[29787766](#), PubMed:[31990367](#)). Can also convert adenosine 5'-O- phosphorothioate and guanosine 5'-O-phosphorothioate to the corresponding nucleoside 5'-O-phosphates with concomitant release of hydrogen sulfide (PubMed:[30772266](#)). In addition, functions as scaffolding protein that modulates transcriptional activation by the LEF1/TCF1-CTNNB1 complex and by the complex formed with MITF and CTNNB1 (PubMed:[16014379](#), PubMed:[22647378](#)). Modulates p53/TP53 levels and p53/TP53-mediated apoptosis (PubMed:[16835243](#)). Modulates proteasomal degradation of target proteins by the SCF (SKP2-CUL1-F-box protein) E3 ubiquitin-protein ligase complex (PubMed:[19112177](#)). Also exhibits SUMO-specific isopeptidase activity, deconjugating SUMO1 from RGS17 (PubMed:[31088288](#)). Deconjugates SUMO1 from RANGAP1 (By similarity).

#### Cellular Location

Cytoplasm. Nucleus. Note=Interaction with CDK7 leads to a more nuclear localization.

#### Tissue Location

Widely expressed.

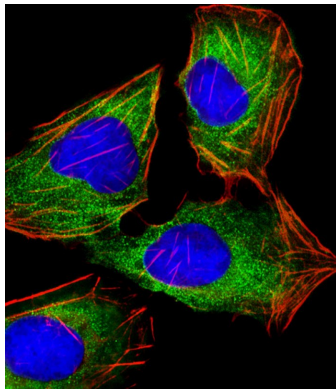
## Background

Hydrolyzes purine nucleotide phosphoramidates with a single phosphate group, including adenosine 5'monophosphoramidate (AMP-NH<sub>2</sub>), adenosine 5'monophosphomorpholidate (AMP-morpholidate) and guanosine 5'monophosphomorpholidate (GMP-morpholidate). Hydrolyzes lysyl-AMP (AMP-N-epsilon-(N-alpha-acetyl lysine methyl ester)) generated by lysine tRNA ligase, as well as Met-AMP, His- AMP and Asp-AMP, lysyl-GMP (GMP-N-epsilon-(N-alpha-acetyl lysine methyl ester)) and AMP-N-alanine methyl ester. Can also convert adenosine 5'-O-phosphorothioate and guanosine 5'-O- phosphorothioate to the corresponding nucleoside 5'-O-phosphates with concomitant release of hydrogen sulfide. In addition, functions as scaffolding protein that modulates transcriptional activation by the LEF1/TCF1-CTNNB1 complex and by the complex formed with MITF and CTNNB1. Modulates p53/TP53 levels and p53/TP53-mediated apoptosis. Modulates proteasomal degradation of target proteins by the SCF (SKP2-CUL1-F-box protein) E3 ubiquitin- protein ligase complex.

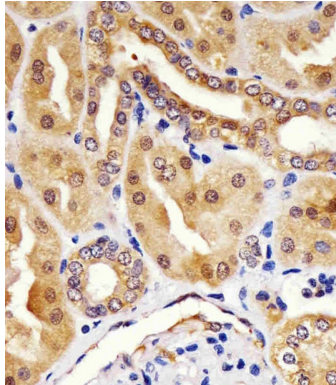
## References

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 Brzoska P.M.,et al.Proc. Natl. Acad. Sci. U.S.A. 92:7824-7828(1995).  
 Ota T.,et al.Nat. Genet. 36:40-45(2004).  
 Ebert L.,et al.Submitted (JUN-2004) to the EMBL/GenBank/DDBJ databases.  
 Lima C.D.,et al.Proc. Natl. Acad. Sci. U.S.A. 93:5357-5362(1996).

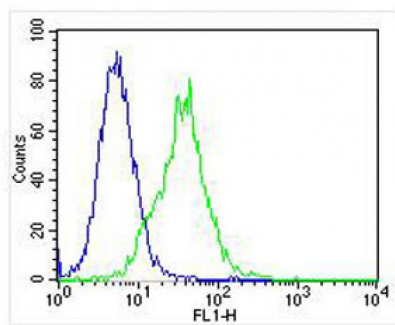
## Images



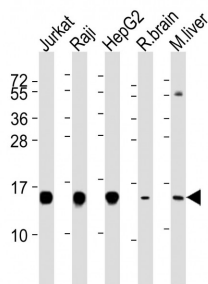
Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized U-2 OS (human bone osteosarcoma cell line) cells labeling HINT1 with AM8470b at 1/25 dilution, followed by Dylight® 488-conjugated goat anti-mouse IgG (NA166821) secondary antibody at 1/200 dilution (green). Immunofluorescence image showing cytoplasm staining on U-2 OS cell line. Cytoplasmic actin is detected with Dylight® 554 Phalloidin (PD18466410) at 1/100 dilution (red). The nuclear counter stain is DAPI (blue).



AM8470b staining HINT1 in human kidney sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Tissue was fixed with formaldehyde and blocked with 3% BSA for 0.5 hour at room temperature; antigen retrieval was by heat mediation with a citrate buffer (pH6). Samples were incubated with primary antibody (1/25) for 1 hours at 37°C. A undiluted biotinylated goat polyvalent antibody was used as the secondary antibody.



Overlay histogram showing Jurkat cells stained with AM8470b (green line). The cells were fixed with 2% paraformaldehyde (10 min) and then permeabilized with 90% methanol for 10 min. The cells were then incubated in 2% bovine serum albumin to block non-specific protein-protein interactions followed by the antibody (AM8470b, 1:25 dilution) for 60 min at 37°C. The secondary antibody used was Goat-Anti-Mouse IgG, DyLight® 488 Conjugated Highly Cross-Adsorbed (NA168821) at 1/400 dilution for 40 min at 37°C. Isotype control antibody (blue line) was mouse IgG1 (1 µg/1x10<sup>6</sup> cells) used under the same conditions. Acquisition of >10,000 events was performed.



All lanes : Anti-HINT1 Antibody at 1:4000 dilution Lane 1: Jurkat whole cell lysates Lane 2: Raji whole cell lysates Lane 3: HepG2 whole cell lysates Lane 4: rat brain lysates Lane 5: mouse liver lysates Lysates/proteins at 20 µg per lane. Secondary Goat Anti-mouse IgG, (H+L), Peroxidase conjugated at 1/10000 dilution Predicted band size : 14 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.