10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

# HINT1 Antibody

Purified Mouse Monoclonal Antibody (Mab)
Catalog # AM8470b

## Product Information

| | |
|---|---|
| **Application** | WB, FC, IHC-P, IF, E |
| **Primary Accession** | P49773 |
| **Reactivity** | Human, Mouse, Rat |
| **Predicted** | Bovine, Canine, Rabbit, Chicken |
| **Host** | Mouse |
| **Clonality** | monoclonal |
| **Isotype** | IgG1,k |
| **Clone Names** | 1500CT836.13.93 |
| **Calculated MW** | 13802 |

## Additional Information

| | |
|---|---|
| **Gene ID** | 3094 |
| **Other Names** | 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 |
| **Target/Specificity** | This HINT1 antibody is generated from a mouse immunized with a recombinant protein of human HINT1. |
| **Dilution** | WB~~1:1000 FC~~1:25 IHC-P~~1:100~500 IF~~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, 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** | HINT1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures. |

## Protein Information

| | |
|---|---|
| **Name** | HINT1 |
| **Synonyms** | HINT, PKCI1, PRKCNH1 |
| **Function** | Exhibits adenosine 5'-monophosphoramidase activity, hydrolyzing purine |

| | |
|---|---|
| | nucleotide phosphoramidates with a single phosphate group such as adenosine 5'monophosphoramidate (AMP-NH2) to yield AMP and NH2 (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. |

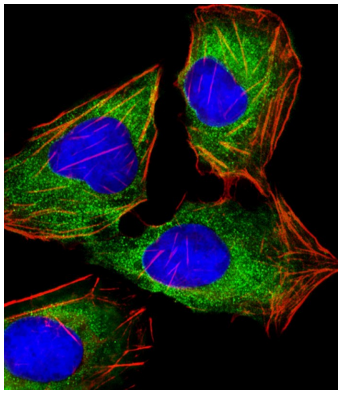
## Background

Hydrolyzes purine nucleotide phosphoramidates with a single phosphate group, including adenosine 5'monophosphoramidate (AMP-NH2), 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.

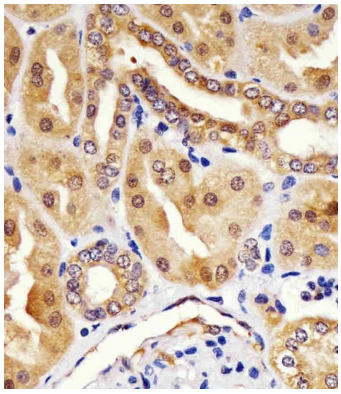
## References


Brzoska P.M.,et al.Genomics 36:151-156(1996).
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).

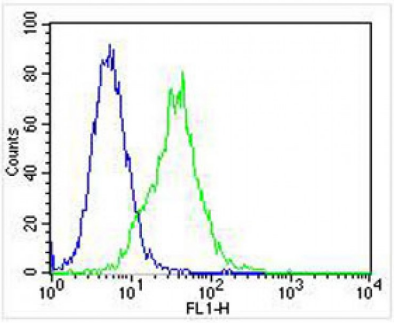

## Images



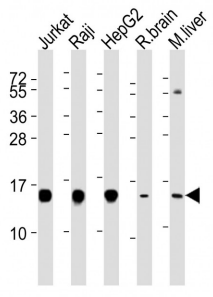
Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized U-2 OS (human bone osteosarcoma cell line) cells labeling HINT1 with AM8470b at 1/25 dilution, followed by Dylight® 488-conjugated goat anti-mouse IgG (NA166821) secondary antibody at 1/200 dilution (green). Immunofluorescence 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 icubated in 2% bovine serum albumin to block non-specific protein-protein interactions followed by the antibody (AM8470b, 1:25 dilution) for 60 min at 37ºC. The secondary antibody used was Goat-Anti-Mouse IgG, DyLight® 488 Conjugated Highly Cross-Adsorbed(NA168821)) at 1/400 dilution for 40 min at 37ºC. Isotype control antibody (blue line) was mouse IgG1 (1µg/1x10^6 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'.