

**HINT1 Antibody**  
Catalog # ASC10773**Specification****HINT1 Antibody - Product Information**

Application	WB, ICC
Primary Accession	<a href="#">P49773</a>
Other Accession	<a href="#">NP_005331</a> , <a href="#">4885413</a>
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Application Notes	HINT1 antibody can be used for detection of HINT1 by Western blot at 1 - 2 µg/mL. Antibody can also be used for immunocytochemistry starting at 2.5 µg/mL.

**HINT1 Antibody - Additional Information**

Gene ID	3094
Target/Specificity	HINT1;

**Reconstitution & Storage**

HINT1 antibody can be stored at 4°C for three months and -20°C, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.

**Precautions**

HINT1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

**HINT1 Antibody - 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-NH<sub>2</sub>) to yield AMP and NH<sub>2</sub> (PubMed: [15703176](http://www.uniprot.org/citations/15703176) target="\_blank">15703176</a>, PubMed: [16835243](http://www.uniprot.org/citations/16835243) target="\_blank">16835243</a>, PubMed: [17217311](http://www.uniprot.org/citations/17217311) target="\_blank">17217311</a>, PubMed: [17337452](http://www.uniprot.org/citations/17337452) target="\_blank">17337452</a>, PubMed: [22329685](http://www.uniprot.org/citations/22329685) target="\_blank">22329685</a>, PubMed: [23614568](http://www.uniprot.org/citations/23614568) target="\_blank">23614568</a>, PubMed: [28691797](http://www.uniprot.org/citations/28691797) target="\_blank">28691797</a>)

target="\_blank">28691797</a>, PubMed:<a href="http://www.uniprot.org/citations/29787766" target="\_blank">29787766</a>, PubMed:<a href="http://www.uniprot.org/citations/31990367" target="\_blank">31990367</a>). Hydrolyzes adenosine 5'monophosphomorpholidate (AMP-morpholidate) and guanosine 5'monophosphomorpholidate (GMP-morpholidate) (PubMed:<a href="http://www.uniprot.org/citations/15703176" target="\_blank">15703176</a>, PubMed:<a href="http://www.uniprot.org/citations/16835243" target="\_blank">16835243</a>). 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:<a href="http://www.uniprot.org/citations/15703176" target="\_blank">15703176</a>, PubMed:<a href="http://www.uniprot.org/citations/17337452" target="\_blank">17337452</a>, PubMed:<a href="http://www.uniprot.org/citations/22329685" target="\_blank">22329685</a>). Hydrolyzes 3-indolepropionic acyl- adenylate, tryptamine adenosine phosphoramidate monoester and other fluorogenic purine nucleoside tryptamine phosphoramidates in vitro (PubMed:<a href="http://www.uniprot.org/citations/17217311" target="\_blank">17217311</a>, PubMed:<a href="http://www.uniprot.org/citations/17337452" target="\_blank">17337452</a>, PubMed:<a href="http://www.uniprot.org/citations/23614568" target="\_blank">23614568</a>, PubMed:<a href="http://www.uniprot.org/citations/28691797" target="\_blank">28691797</a>, PubMed:<a href="http://www.uniprot.org/citations/29787766" target="\_blank">29787766</a>, PubMed:<a href="http://www.uniprot.org/citations/31990367" target="\_blank">31990367</a>). 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:<a href="http://www.uniprot.org/citations/30772266" target="\_blank">30772266</a>). 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:<a href="http://www.uniprot.org/citations/16014379" target="\_blank">16014379</a>, PubMed:<a href="http://www.uniprot.org/citations/22647378" target="\_blank">22647378</a>). Modulates p53/TP53 levels and p53/TP53-mediated apoptosis (PubMed:<a href="http://www.uniprot.org/citations/16835243" target="\_blank">16835243</a>). Modulates proteasomal degradation of target proteins by the SCF (SKP2-CUL1-F-box protein) E3 ubiquitin-protein ligase complex (PubMed:<a href="http://www.uniprot.org/citations/19112177" target="\_blank">19112177</a>). Also exhibits SUMO- specific isopeptidase activity, deconjugating SUMO1 from RGS17 (PubMed:<a href="http://www.uniprot.org/citations/31088288" target="\_blank">31088288</a>). Deconjugates SUMO1 from RANGAP1 (By similarity).

#### Cellular Location

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

#### Tissue Location

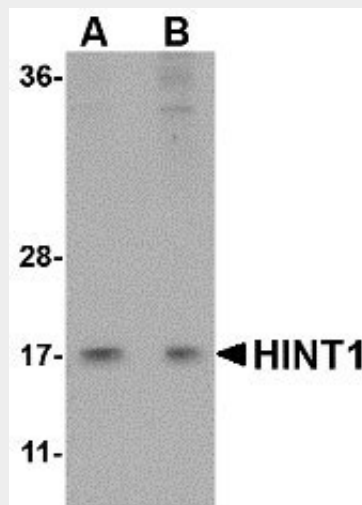
Widely expressed.

#### HINT1 Antibody - Protocols

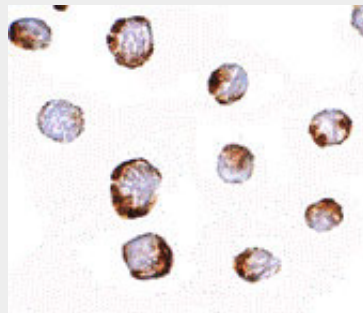
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

#### HINT1 Antibody - Images



Western blot analysis of HINT1 in Jurkat lysate with HINT1 antibody at (A) 1 and (B) 2 µg/mL.



Immunocytochemistry of HINT1 in Jurkat cells with HINT1 antibody at 2.5 µg/mL.

### **HINT1 Antibody - Background**

**HINT1 Antibody:** Histidine triad nucleotide-binding protein 1 (HINT1) is a member of the histidine triad (HIT) protein family, a group of small nucleotide-binding and -hydrolyzing proteins. HINT1 interacts with several diverse proteins and has been suggested to have tumor suppressive activities. HINT1 catalyzes the hydrolysis of adenosine 5'-monophoramidate substrates such as AMP-morpholidate, but its enzymatic function does not appear to play a role in its tumor suppression. Recent experiments demonstrate that HINT1 forms a complex with POSH and JNK in vivo, inhibiting AP-1 activity and the phosphorylation of c-Jun, and this action could contribute to the tumor suppressor activity of HINT1. Other studies raise the possibility of HINT1 as a candidate gene for schizophrenia.

### **HINT1 Antibody - References**

- Lima CD, Klein MG, Weinstein IB, et al. Three-dimensional structure of human protein kinase C interacting protein 1, a member of the HIT family of proteins. *Proc. Natl. Acad. Sci. USA*1996; 93:5357-62.
- Weiske J and Huber O. Beta-catenin takes a HIT. *Cell Cycle*2008; 7:1326-31.
- Wang L, Zhang Y, Li H, et al. Hint1 inhibits growth and activator protein-1 activity in human colon cancer cells. *Cancer Res.*2007; 67:4700-8.
- Chen Q, Wang X, O'Neill FA, et al. Is the histidine triad nucleotide-binding protein 1 (HINT1) gene a candidate for schizophrenia? *Schizophr. Res.*2008; 106:200-7.