

**Phospho-HDAC2-S394 Antibody**  
**Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AE1014b****Specification**

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**Phospho-HDAC2-S394 Antibody - Product Information**

Application	WB, IHC, IF
Primary Accession	<a href="#">Q92769</a>
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Concentration	1mg/ml
Isotype	Rabbit IgG
Calculated MW	55364

**Phospho-HDAC2-S394 Antibody - Additional Information****Gene ID** 3066**Other Names**

Histone deacetylase 2, HD2, HDAC2

**Target/Specificity**

The antibody was affinity-purified from rabbit antiserum using epitope-specific phosphopeptide column, and the antibody against non-phosphopeptide was removed using non-phosphopeptide column corresponding to the phosphorylation site.

**Dilution**

WB~~1:500~1:1000

IHC~~1:50~1:100

IF~~1:100~200

**Format**

affinity Purified IgG, in PBS, 0.02% sodium azide and 50% glycerol.

**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**

Phospho-HDAC2-S394 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

**Phospho-HDAC2-S394 Antibody - Protein Information****Name** HDAC2 {ECO:0000303|PubMed:10545197, ECO:0000312|HGNC:HGNC:4853}

### Function

Histone deacetylase that catalyzes the deacetylation of lysine residues on the N-terminal part of the core histones (H2A, H2B, H3 and H4) (PubMed:<a href="http://www.uniprot.org/citations/28497810" target="\_blank">28497810</a>). Histone deacetylation gives a tag for epigenetic repression and plays an important role in transcriptional regulation, cell cycle progression and developmental events (By similarity). Histone deacetylases act via the formation of large multiprotein complexes (By similarity). Forms transcriptional repressor complexes by associating with MAD, SIN3, YY1 and N-COR (PubMed:<a href="http://www.uniprot.org/citations/12724404" target="\_blank">12724404</a>). Component of a RCOR/GFI/KDM1A/HDAC complex that suppresses, via histone deacetylase (HDAC) recruitment, a number of genes implicated in multilineage blood cell development (By similarity). Acts as a component of the histone deacetylase NuRD complex which participates in the remodeling of chromatin (PubMed:<a href="http://www.uniprot.org/citations/16428440" target="\_blank">16428440</a>, PubMed:<a href="http://www.uniprot.org/citations/28977666" target="\_blank">28977666</a>). Component of the SIN3B complex that represses transcription and counteracts the histone acetyltransferase activity of EP300 through the recognition H3K27ac marks by PHF12 and the activity of the histone deacetylase HDAC2 (PubMed:<a href="http://www.uniprot.org/citations/37137925" target="\_blank">37137925</a>). Also deacetylates non-histone targets: deacetylates TSHZ3, thereby regulating its transcriptional repressor activity (PubMed:<a href="http://www.uniprot.org/citations/19343227" target="\_blank">19343227</a>). May be involved in the transcriptional repression of circadian target genes, such as PER1, mediated by CRY1 through histone deacetylation (By similarity). Involved in MTA1-mediated transcriptional corepression of TFF1 and CDKN1A (PubMed:<a href="http://www.uniprot.org/citations/21965678" target="\_blank">21965678</a>). In addition to protein deacetylase activity, also acts as a protein-lysine deacylase by recognizing other acyl groups: catalyzes removal of (2E)-butenoyl (crotonyl) and 2- hydroxyisobutanoyl (2-hydroxyisobutyryl) acyl groups from lysine residues, leading to protein decrotonylation and de-2- hydroxyisobutyrylation, respectively (PubMed:<a href="http://www.uniprot.org/citations/28497810" target="\_blank">28497810</a>, PubMed:<a href="http://www.uniprot.org/citations/29192674" target="\_blank">29192674</a>).

### Cellular Location

Nucleus. Cytoplasm

### Tissue Location

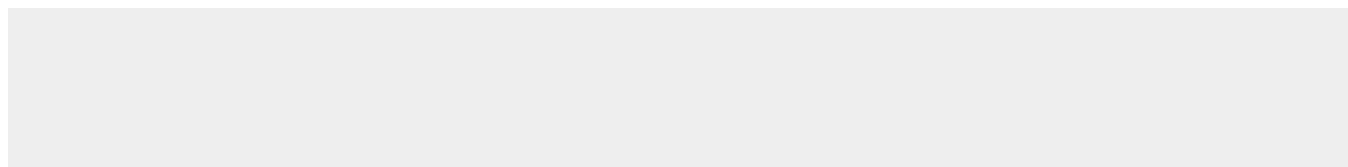
Widely expressed; lower levels in brain and lung.

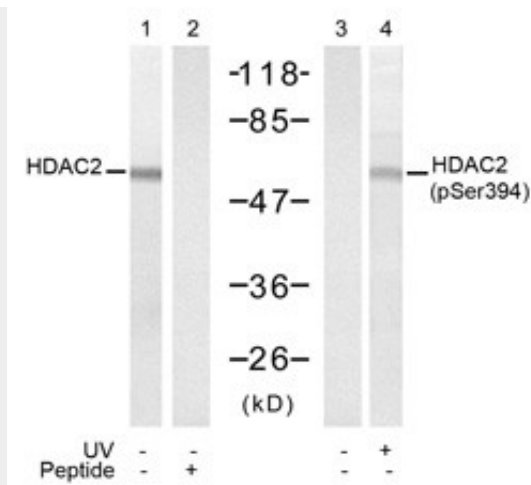
### Phospho-HDAC2-S394 Antibody - Protocols

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

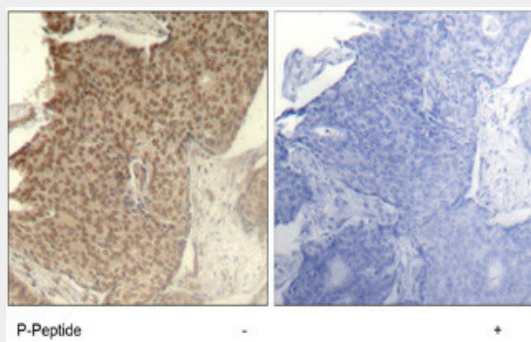
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### Phospho-HDAC2-S394 Antibody - Images

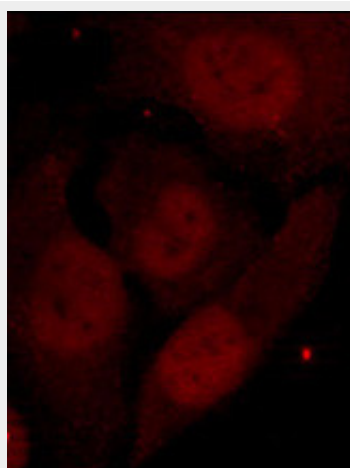




Western blot analysis of extracts from HT-29 cells untreated or treated with UV (20min), using HDAC2 Antibody (S394) (#AE1014a, Lane 1 and 2) and Phospho-HDAC2-S394 Antibody (#AE1014b, Lane 3 and 4).



Immunohistochemical analysis of paraffin-embedded human breast carcinoma tissue using Phospho-HDAC2-S394 Antibody (#AE1014b).



Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear staining using Phospho-HDAC2-S394 Antibody (#AE1014b).

#### Phospho-HDAC2-S394 Antibody - Background

This gene product belongs to the histone deacetylase family. Histone deacetylases act via the formation of large multiprotein complexes, and are responsible for the deacetylation of lysine residues at the N-terminal regions of core histones (H2A, H2B, H3 and H4). This protein forms

transcriptional repressor complexes by associating with many different proteins, including YY1, a mammalian zinc-finger transcription factor. Thus, it plays an important role in transcriptional regulation, cell cycle progression and developmental events. Alternative splicing results in multiple transcript variants.

#### **Phospho-HDAC2-S394 Antibody - References**

Combination of polymorphisms within the HDAC1 and HDAC3 gene predict tumor recurrence in hepatocellular carcinoma patients that have undergone transplant therapy. Yang Z, et al. Clin Chem Lab Med, 2010 Aug 24. PMID 20731616.

Variation at the NFATC2 Locus Increases the Risk of Thiazolinedinedione-Induced Edema in the Diabetes REduction Assessment with ramipril and rosiglitazone Medication (DREAM) Study. Bailey SD, et al. Diabetes Care, 2010 Jul 13. PMID 20628086.

Differential histone deacetylase mRNA expression patterns in amyotrophic lateral sclerosis. Janssen C, et al. J Neuropathol Exp Neurol, 2010 Jun. PMID 20467334.

HDAC2 promotes eIF4E sumoylation and activates mRNA translation gene specifically. Xu X, et al. J Biol Chem, 2010 Jun 11. PMID 20421305.

Class I histone deacetylases 1, 2 and 3 are highly expressed in classical Hodgkin's lymphoma. Adams H, et al. Expert Opin Ther Targets, 2010 Jun. PMID 20415600.