

Rabbit HDAC1 Polyclonal Antibody | anti-HDAC1 antibody

Phospho-HDAC1 (Ser421) Antibody

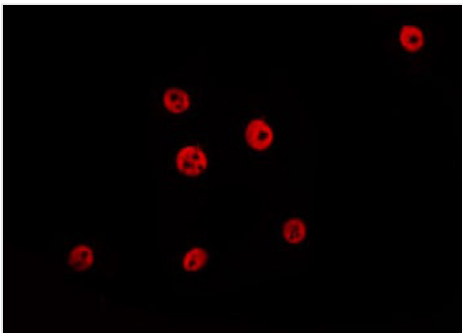
CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA321723	Rabbit	Human, Mouse, Rat	ELISA, Immunocytochemistry, Immunofluorescence, Western Blot

PRODUCT SYNONYMS

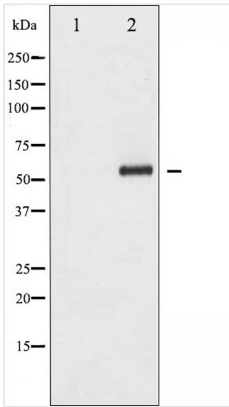
HDAC1; Polyclonal Antibody; Phospho-HDAC1 (Ser421) Antibody; DKFZp686H12203; GON 10; HD1; HDAC 1; HDAC1_HUMAN; Histone deacetylase 1; Reduced potassium dependency yeast homolog like 1; RPD3; RPD3L1; anti-HDAC1 antibody

PRODUCT SPECIFICATIONS

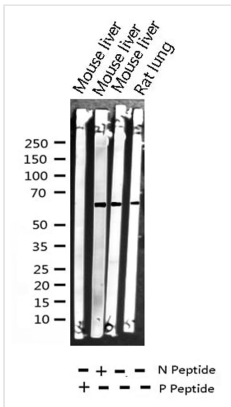
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Isotype	IgG
Specificity	Phospho-HDAC1 (Ser421) antibody detects endogenous levels of HDAC1 only when phosphorylated at Serine 421
Purity/Purification	From purified rabbit serum by affinity purification via sequential chromatography on phospho- and non-phospho-peptide affinity columns.
Form/Format	Liquid Phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Sequence Length	482
Applicable Applications for anti-HDAC1 antibody	ELISA, ICC (Immunocytochemistry), IF (Immunofluorescence), WB (Western Blot)
Immunogen	A synthesized peptide derived from human HDAC1 around the phosphorylation site of Serine 421
Subcellular Location	Nucleus.
Tissue Specificity	Ubiquitous, with higher levels in heart, pancreas and testis, and lower levels in kidney and brain.
Predicted Cross Reactivity	Pig, Zebrafish, Bovine, Horse, Sheep, Dog, Chicken, Xenopus
Similarity	Pig (0%), Zebrafish (78%), Bovine (0%), Horse (0%), Sheep (0%), Dog (0%), Chicken (78%), Xenopus (78%)
Conjugation	Unconjugated
Epitope	Phospho Ser421
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.



IF (Immunofluorescence)
AAA321723 staining Hela by IF/ICC. The sample were fixed with PFA and permeabilized in 0.1% Triton X-100, then blocked in 10% serum for 45 minutes at 25 degree C. The primary antibody was diluted at 1/200 and incubated with the sample for 1 hour at 37 degree C. An Alexa Fluor 594 conjugated goat anti-rabbit IgG (H+L) Ab, diluted at 1/600, was used as the secondary antibody.



WB (Western Blot)
Western blot analysis of HDAC1 phosphorylation expression in EGF treated Jurkat whole cell lysates, The lane on the left is treated with the antigen-specific peptide.



WB (Western Blot)
Western blot analysis of Phospho-HDAC1 (Ser421) expression in various lysates

ADDITIONAL INFORMATION

Related Product Information for anti-HDAC1 antibody	Description: Histone acetylation and deacetylation, catalyzed by multisubunit complexes, play a key role in the regulation of eukaryotic gene expression. The protein encoded by this gene belongs to the histone deacetylase/acuc/apha family and is a component of the histone deacetylase complex. Function: Responsible for the deacetylation of lysine residues on the N-terminal part of the core histones (H2A, H2B, H3 and H4). Histone deacetylation gives a tag for epigenetic repression and plays an important role in transcriptional regulation, cell cycle progression and developmental events. Histone deacetylases act via the formation of large multiprotein complexes. Deacetylates SP proteins, SP1 and SP3, and regulates their function. Component of the BRG1-RB1-HDAC1 complex, which negatively regulates the CREST-mediated transcription in resting neurons. Upon calcium stimulation, HDAC1 is released from the complex and CREBBP is recruited, which facilitates transcriptional activation. Deacetylates TSHZ3 and regulates its transcriptional repressor activity. Deacetylates 'Lys-310' in RELA and thereby inhibits the transcriptional activity of NF-kappa-B. Deacetylates NR1D2 and abrogates the effect of KAT5-mediated relieving of NR1D2 transcription repression activity. 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. Involved in CIART-mediated transcriptional repression of the circadian transcriptional activator: CLOCK-ARNTL/BMAL1 heterodimer. Required for the transcriptional repression of circadian target genes, such as PER1, mediated by the large PER complex or CRY1 through histone deacetylation. Subunit Structure: Part of the core histone deacetylase (HDAC) complex composed of HDAC1, HDAC2, RBBP4 and RBBP7. The core complex associates with MTA2, MBD2, MBD3, MTA1L1, CHD3 and CHD4 to form the nucleosome remodeling and histone deacetylation (NuRD) complex, or with SIN3, SAP18 and SAP30 to form the SIN3 HDAC complex. Component of a BHC histone deacetylase complex that contains HDAC1, HDAC2, HMG20B/BRAF35, KDM1A, RCOR1/CoREST and PHF21A/BHC80. The BHC complex may also contain ZMYM2, ZNF217, ZMYM3, GSE1 and GTF2I. Component of a mSin3A corepressor complex that contains SIN3A, SAP130, SUDS3/SAP45, ARID4B/SAP180, HDAC1 and HDAC2. Found in a trimeric complex with APBB1 and TSHZ3; the interaction between HDAC1 and APBB1 is mediated by TSHZ3. Component of a RCOR/GFI/KDM1A/HDAC complex. Part of a complex composed of TRIM28, HDAC1, HDAC2 and EHMT2. Part of a complex containing at least CDYL, MIER1, MIER2, HDAC1 and HDAC2. The large PER complex involved in the histone deacetylation is composed of at least HDAC1, PER2, SFPQ and SIN3A. Associates with the 9-1-1 complex; interacts with HUS1. Found in a complex with DNMT3A and HDAC7. Interacts with the non-histone region of H2AFY. Interacts with TRIM28; the interaction recruits HDAC1 to E2F1 and inhibits its acetylation. Interacts with SP1; the interaction deacetylates SP1 and regulates its transcriptional activity. Interacts with SP3; the interaction deacetylates SP3 and regulates its transcriptional activity. In vitro, C(18) ceramides increase this interaction and the subsequent SP3 deacetylation and SP3-mediated repression of the TERT promoter. Interacts with TSHZ3 (via N-terminus); the interaction is direct. Interacts with APEX1; the interaction is not dependent on the acetylated status of APEX1. Interacts with C10orf90/FATS (via its N-terminal); the interaction prevents binding of HDAC1 to CDKN1A/p21 and facilitates the acetylation and stabilization of CDKN1A/p21. Interacts with CDKN1A/p21. Interacts with CDK5 complexed to CDK5R1 (p25). Interacts directly with GFI1 and GFI1B. Interacts with NR1D2 (via C-terminus). Interacts with TSC22D3 isoform 1; this interaction affects HDAC1 activity on MYOG promoter and thus inhibits MYOD1 transcriptional activity. Interacts with BAZ2A/TIP5, BANP, BCL6, BCOR, BHLHE40/DEC1, BRMS1, BRMS1L, CBFA2T3, CHFR, CIART, CRY1, DAXX, DDIT3/CHOP, DDX5, DNMT1, E4F1, EP300, HCF1, HDAC9, INSM1, NFE4, NR4A2/NURR1, MIER1, KDM4A, KDM5B, KLF1, MINT, NRIP1, PCAF, PHB2, PRDM6, PRDM16, RB1, RERE, SAMSN1, SAP30L, SETDB1, SMAD3, SMARCA4/BRG1, SMYD2, SUV39H1, TGIF, TGIF2, TRAF6, UHRF1, UHRF2, ZMYND15, ZNF431 and ZNF541. Interacts with KDM5A (By similarity). Interacts with DNTTIP1 (PubMed:25653165). Identified in a histone deacetylase complex that contains DNTTIP1, HDAC1 and ELMSAN1; this complex assembles into a tetramer that contains four copies of each protein chain (PubMed:25653165). Interacts with CCAR2 (PubMed:21030595). Interacts with PPHLN1 (PubMed:17963697). Found in a complex with YY1, SIN3A and GON4L (By similarity). Interacts with CHD4 (PubMed:27616479). Found in a complex composed of at least SINHCAF, SIN3A, HDAC1, SAP30, RBBP4, OGT and TET1. Interacts with SIN3A (By similarity). Post-translational Modifications: Sumoylated on Lys-444 and Lys-476; which promotes enzymatic activity. Desumoylated by SENP1. Phosphorylation on Ser-421 and Ser-423 promotes enzymatic activity and interactions with NuRD and SIN3 complexes. Phosphorylated by CDK5. Ubiquitinated by CHFR, leading to its degradation by the proteasome. Ubiquitinated by KCTD11, leading to proteasomal degradation. Similarity: Belongs to the histone deacetylase family. HD type 1 subfamily.
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NCBI AND UNIPROT INFORMATION

NCBI GI #	13128860
NCBI GeneID	3065
NCBI Accession #	NP_004955.2

NCBI GenBank Nucleotide #	NM_004964.2
UniProt Accession #	Q13547 ; Q92534
Molecular Weight	Observed: 62 kDa Predicted: 56 kDa
NCBI Official Full Name	histone deacetylase 1
NCBI Official Synonym Full Names	histone deacetylase 1
NCBI Official Symbol	HDAC1
NCBI Official Synonym Symbols	HD1; RPD3; GON-10; RPD3L1
NCBI Protein Information	histone deacetylase 1
UniProt Protein Name	Histone deacetylase 1
UniProt Gene Name	HDAC1
UniProt Synonym Gene Names	RPD3L1; HD1

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/polyclonal/hdac1-antibody-immunocytochemistry-immunofluorescence-western-blot-elisa/321723>