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Datasheet for 600-401-879

HDAC1 (C-terminus) Antibody

Overview

Description:	Anti-HDAC1 (RABBIT) Antibody - 600-401-879
Item No.:	600-401-879
Size:	100 µg
Applications:	ELISA, IF, IHC, Multiplex, WB
Reactivity:	Human
Host Species:	Rabbit

Product Details

Background:	HDAC-1 antibody recognizes HDAC1 (also known as HD1, histone deacetylase 1, RPD3, RPD3L1) which belongs to the histone deacetylase/acuc/apha family and is a component of the histone deacetylase complex. Histone acetylation and deacetylation, catalyzed by multisubunit complexes, play a key role in the regulation of eukaryotic gene expression. It also interacts with retinoblastoma tumor-suppressor protein and this complex is a key element in the control of cell proliferation and differentiation. Together with metastasis-associated protein-2, it deacetylates p53 and modulates its effect on cell growth and apoptosis.
Synonyms:	rabbit anti-HDAC-1 antibody, HDAC1, HDAC 1, HD 1 antibody, histone deacetylase 1 antibody, Histone deacetylase-1, HD1 antibody, RPD3L1, reduced potassium dependency yeast homolog like 1 antibody
Host Species:	Rabbit
Clonality:	Polyclonal
Format:	IgG

Target Details

Gene Name:	HDAC1
Reactivity:	Human
Immunogen Type:	Conjugated Peptide

Immunogen:	Anti-HDAC-1 antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic peptide corresponding to a C-Terminal region near amino acids 450-482 of Human HDAC-1.
Purity/Specificity:	Anti-HDAC-1 antibody is directed against human HDAC-1 protein. HDAC-1 antibody was affinity purified from monospecific antiserum by immunoaffinity purification. A BLAST analysis was used to suggest reactivity with this protein from human, mouse, rat and chimpanzee sources based on 100% homology for the immunogen sequence. Cross reactivity may occur with HDAC-1 from bovine (82% homology) and chicken (80% homology) sources. Cross reactivity with HDAC-1 homologues from other sources has not been determined.
Relevant Links:	• UniProtKB - Q13547 • NCBI - 13128860 • GeneID - 3065

Application Details

Tested Applications:	ELISA, IF, IHC, Multiplex, WB
Application Note:	Anti-HDAC-1 Antibody has been tested for use in ELISA, immunohistochemistry, immunofluorescence, and western blot. Specific conditions for reactivity should be optimized by the end user. Specific nuclear staining is observed by IHC. Expect bands at 65 kDa in size corresponding to HDAC-1 by western blotting in the appropriate cell lysate or extract.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ELISA:	1:10,000 - 1:50,000
IF:	10ug / ml
IHC:	1:200 - 1:1,000
WB:	1:1,000 - 1:5,000

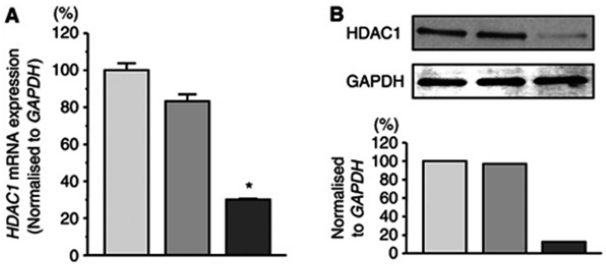
Formulation

Physical State:	Liquid (sterile filtered)
Concentration:	1.33 mg/mL by UV absorbance at 280 nm
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Preservative:	0.01% (w/v) Sodium Azide
Stabilizer:	None

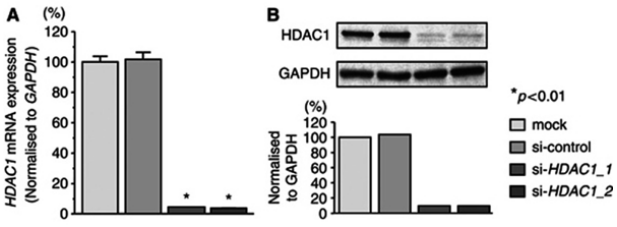
Shipping & Handling

Shipping Condition:	Dry Ice
Storage Condition:	Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.
Expiration:	Expiration date is one (1) year from date of receipt.

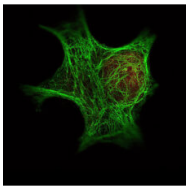
Images



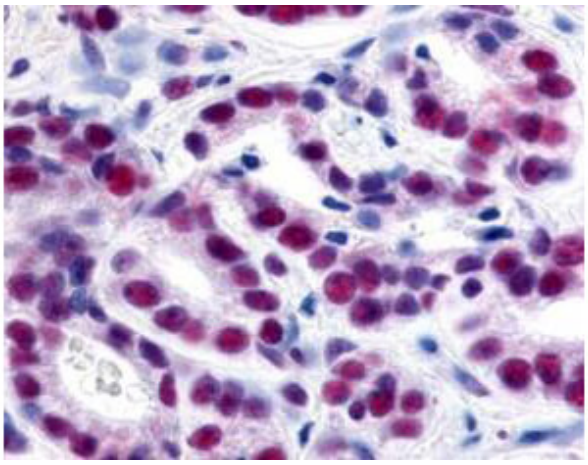
Western Blot
Effect of miR-874 on HDAC1 mRNA and protein expression in SAS and FaDu cells. (A) HDAC1 mRNA expression 72 h after transfection with 10 n□ miR-874. HDAC1 mRNA expression was significantly repressed
in miR-874 transfectants. GAPDH was used as an internal control. (B) HDAC1 protein expression 72 h after transfection with miR-874. GAPDH was used as a loading control. The protein expression level of HDAC1 was also repressed
in miR-874 transfectants. Fig 5. PMID: 23558898



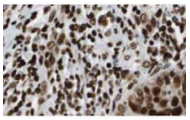
Western Blot
Silencing of HDAC1 in HNSCC cell lines by
siRNAs. (A) HDAC1 mRNA expression 72 h after transfection with 10 n□ si-HDAC1_1, si-HDAC1_2 or si-control. HDAC1 mRNA expression was repressed in si-HDAC1_1 and si-HDAC1_2 transfectants. GAPDH was used as an internal control. (B) HDAC1 protein expression 72 h after transfection of the siRNAs. GAPDH was used a loading control. The protein expression level of HDAC1 was also repressed in si-HDAC1_1 and si-HDAC1_2 transfectants. Trials were independently conducted three times. *P<0.01. Fig 6. PMID: 23558898



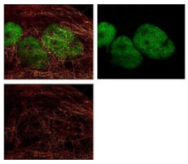
Immunofluorescence Microscopy
Immunofluorescence Microscopy of Rabbit Anti-HDAC-1 antibody. Fixation: 0.5% PFA. Antigen retrieval: not required. Primary antibody: HDAC-1 antibody at 10 µg/mL for 1 h at RT. Secondary antibody: rabbit secondary antibody at 1:10,000 for 45 min at RT. Localization: HDAC-1 is nuclear. Staining: HDAC-1 was used with Atto 425 (shown in red). Anti-Keratin monoclonal antibody was used with Dylight 488 (shown in green) to detect Keratin. Data was collected on a STED-CW TCS-SP5 Confocal system (Leica Microsystems).



Immunohistochemistry
Immunohistochemistry of Rabbit Anti-HDAC-1 Antibody. Tissue: human prostate cancer tissue. Fixation: formalin fixed paraffin embedded. Antigen retrieval: not required. Primary antibody: HDAC-1 antibody at 1:500 for 1 h at RT. Secondary antibody: Peroxidase rabbit secondary antibody at 1:10,000 for 45 min at RT. Localization: HDAC-1 is nuclear. Staining: HDAC-1 precipitated purple with blue counterstain. Personal Communication, Alan Yen, LifeSpanBiosciences, Seattle, WA.

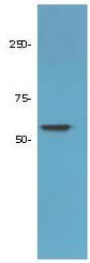


Immunohistochemistry
Immunohistochemistry of Rabbit Anti-HDAC-1 Antibody. Tissue: human lung tissue. Fixation: formalin fixed paraffin embedded. Antigen retrieval: not required. Primary antibody: HDAC-1 antibody at 10 µg/mL for 1 h at RT. Secondary antibody: Peroxidase rabbit secondary antibody at 1:10,000 for 45 min at RT. Localization: HDAC-1 is nuclear. Staining: HDAC-1 as brown color indicates presence of protein, blue color shows cell nuclei.



Immunofluorescence Microscopy
Immunofluorescence Microscopy of Rabbit anti-HDAC1 Antibody. Tissue: A431 cells. Fixation: methanol. Antigen retrieval: blocked with normal goat serum. Primary antibody: HDAC1 antibody at 4 µg/mL for 1 h at RT. Secondary antibody: rabbit secondary antibody at 0.2 µg/mL for 45 min at RT. Localization: HDAC1 is nuclear. Staining: HDAC1 as green fluorescent signal. A-tubulin monoclonal antibody detected with ATTO 425 (colored RED). 2-color STED image, Leica Microsystems.

Western Blot
Western Blot of Rabbit Anti-HDAC-1 Antibody. Lane 1: 293 whole cell lysate (p/n W09-000-365). Load: 35 µg per lane. Primary antibody: HDAC-1 antibody at 1:3,500 for overnight at 4°C. Secondary antibody: IRDye800™ rabbit secondary antibody at 1:10,000 for 45 min at RT. Block: 5% BLOTTO (p/n B501-0500) overnight at 4°C. Predicted/Observed size: ~65 kDa corresponding to human HDAC1. Other band(s): none.



Western Blot
Western Blot of Rabbit Anti-HDAC-1 Antibody. Lane 1: LNCaP prostate cancer cells. Load: 50 µg per lane. Primary antibody: HDAC-1 antibody at 1:1000 for overnight at 4°C. Secondary antibody: IRDye800™ rabbit secondary antibody at 1:10,000 for 45 min at RT. Block: 5% BLOTTO overnight at 4°C. Predicted/Observed size: 55kDa for HDAC-1.

References

- Scharer et al. Plasma cell differentiation is controlled by multiple cell division-coupled epigenetic programs. *Nature Communications* (2018)
- Nohata N et al. Tumour-suppressive microRNA-874 contributes to cell proliferation through targeting of histone deacetylase 1 in head and neck squamous cell carcinoma. *Br J Cancer.* (2013)

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