

HDAC4 Antibody (C-term)
Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP13715b

Specification

HDAC4 Antibody (C-term) - Product Information

Application	IF, IHC-P, WB,E
Primary Accession	P56524
Other Accession	NP_006028.2
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	119040
Antigen Region	1049-1077

HDAC4 Antibody (C-term) - Additional Information

Gene ID 9759

Other Names

Histone deacetylase 4, HD4, HDAC4, KIAA0288

Target/Specificity

This HDAC4 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 1049-1077 amino acids from the C-terminal region of human HDAC4.

Dilution

IF~~~1:10~50
IHC-P~~~1:10~50
WB~~~1:1000
E~~~Use at an assay dependent concentration.

Format

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

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

HDAC4 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

HDAC4 Antibody (C-term) - Protein Information

Name HDAC4 ([HGNC:14063](#))

Synonyms KIAA0288

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. Involved in muscle maturation via its interaction with the myocyte enhancer factors such as MEF2A, MEF2C and MEF2D. Involved in the MTA1-mediated epigenetic regulation of ESR1 expression in breast cancer. Deacetylates HSPA1A and HSPA1B at 'Lys-77' leading to their preferential binding to co-chaperone STUB1 (PubMed:[27708256](#)).

Cellular Location

Nucleus. Cytoplasm. Note=Shuttles between the nucleus and the cytoplasm. Upon muscle cells differentiation, it accumulates in the nuclei of myotubes, suggesting a positive role of nuclear HDAC4 in muscle differentiation. The export to cytoplasm depends on the interaction with a 14-3-3 chaperone protein and is due to its phosphorylation at Ser-246, Ser-467 and Ser-632 by CaMK4 and SIK1. The nuclear localization probably depends on sumoylation Interaction with SIK3 leads to HDAC4 retention in the cytoplasm (By similarity). {ECO:0000250|UniProtKB:Q6NZM9}

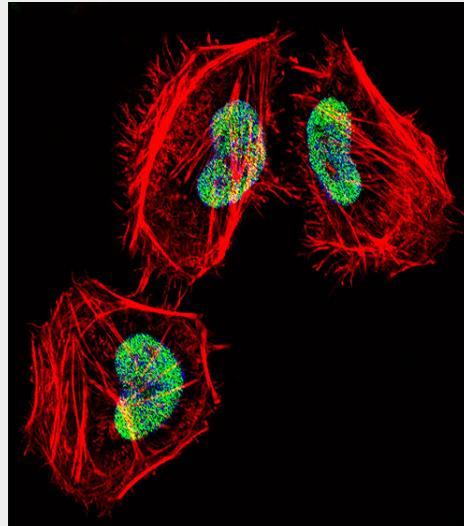
Tissue Location

Ubiquitous.

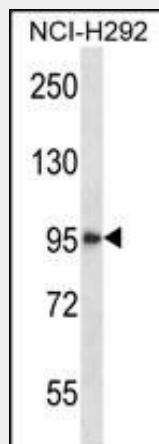
HDAC4 Antibody (C-term) - Protocols

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

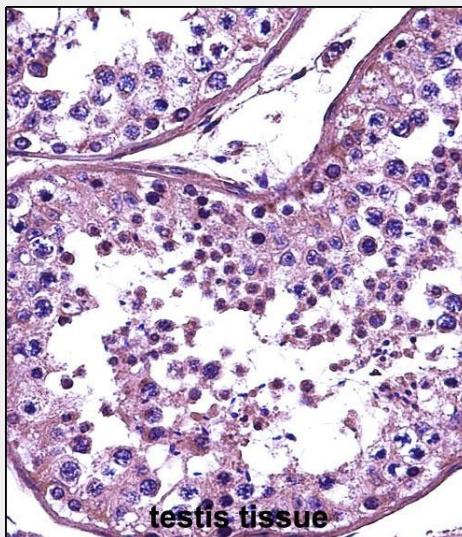
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

HDAC4 Antibody (C-term) - Images

Fluorescent confocal image of HeLa cell stained with HDAC4 Antibody (C-term)(Cat#AP13715b). HeLa cells were fixed with 4% PFA (20 min), permeabilized with Triton X-100 (0.1%, 10 min), then incubated with HDAC4 primary antibody (1:25, 1 h at 37°C). For secondary antibody, Alexa Fluor® 488 conjugated donkey anti-rabbit antibody (green) was used (1:400, 50 min at 37°C). Cytoplasmic actin was counterstained with Alexa Fluor® 555 (red) conjugated Phalloidin (7units/ml, 1 h at 37°C). Nuclei were counterstained with DAPI (blue) (10 µg/ml, 10 min). HDAC4 immunoreactivity is localized to Nucleus significantly.



HDAC4 Antibody (C-term) (Cat. #AP13715b) western blot analysis in NCI-H292 cell line lysates (35ug/lane). This demonstrates the HDAC4 antibody detected the HDAC4 protein (arrow).



HDAC4 Antibody (C-term) (Cat. #AP13715b) immunohistochemistry analysis in formalin fixed and paraffin embedded human testis tissue followed by peroxidase conjugation of the secondary antibody and DAB staining. This data demonstrates the use of HDAC4 Antibody (C-term) for immunohistochemistry. Clinical relevance has not been evaluated.

HDAC4 Antibody (C-term) - Background

Histones play a critical role in transcriptional regulation, cell cycle progression, and developmental events. Histone acetylation/deacetylation alters chromosome structure and affects transcription factor access to DNA. The protein encoded by this gene belongs to class II of the histone deacetylase/acuc/apha family. It possesses histone deacetylase activity and represses transcription when tethered to a promoter. This protein does not bind DNA directly, but through transcription factors MEF2C and

MEF2D. It seems to interact in a multiprotein complex with RbAp48 and HDAC3.

HDAC4 Antibody (C-term) - References

Bailey, S.D., et al. Diabetes Care 33(10):2250-2253(2010)
Williams, S.R., et al. Am. J. Hum. Genet. 87(2):219-228(2010)
Kim, T., et al. Psychiatry Res 178(2):266-269(2010)
Pan, L., et al. Cell. Mol. Immunol. 7(3):221-226(2010)
Smith, J.A., et al. Virol. J. 7, 237 (2010) :