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HDAC10 Antibody (N-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP1110a

Product Information

Application	WB, E
Primary Accession	Q969S8
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	71445
Antigen Region	16-46

Additional Information

Gene ID	83933
Other Names	Histone deacetylase 10, HD10, HDAC10
Target/Specificity	This HDAC10 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 16-46 amino acids from the N-terminal region of human HDAC10.
Dilution	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	HDAC10 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	HDAC10
Function	Polyamine deacetylase (PDAC), which acts preferentially on N(8)-acetylspermidine, and also on acetylcadaverine and acetylputrescine (PubMed:28516954). Exhibits attenuated catalytic activity toward N(1),N(8)-diacetylspermidine and very low activity, if any, toward N(1)-acetylspermidine (PubMed:28516954). Histone deacetylase activity has been observed in vitro (PubMed:11677242, PubMed:11726666,

PubMed:11739383, PubMed:11861901). Has also been shown to be involved in MSH2 deacetylation (PubMed:26221039). The physiological relevance of protein/histone deacetylase activity is unclear and could be very weak (PubMed:28516954). May play a role in the promotion of late stages of autophagy, possibly autophagosome- lysosome fusion and/or lysosomal exocytosis in neuroblastoma cells (PubMed:23801752, PubMed:29968769). May play a role in homologous recombination (PubMed:21247901). May promote DNA mismatch repair (PubMed:26221039).

Cellular Location Cytoplasm. Nucleus Note=Excluded from nucleoli.

Tissue Location Widely expressed with high levels in liver and kidney.

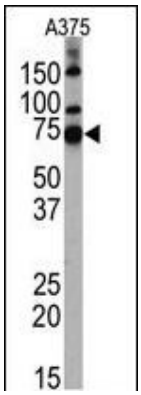
Background

Histone deacetylase (HDAC) and histone acetyltransferase (HAT) are enzymes that regulate transcription by selectively deacetylating or acetylating the eta-amino groups of lysines located near the amino termini of core histone proteins (1). Eight members of HDAC family have been identified in the past several years (2,3). These HDAC family members are divided into two classes, I and II. Class I of the HDAC family comprises four members, HDAC-1, 2, 3, and 8, each of which contains a deacetylase domain exhibiting from 45 to 93% identity in amino acid sequence. Class II of the HDAC family comprises HDAC-4, 5, 6, and 7, the molecular weights of which are all about two-fold larger than those of the class I members, and the deacetylase domains are present within the C-terminal regions, except that HDAC-6 contains two copies of the domain, one within each of the N-terminal and C-terminal regions. Human HDAC-1, 2 and 3 were expressed in various tissues, but the others (HDAC-4, 5, 6, and 7) showed tissue-specific expression patterns (3). These results suggested that each member of the HDAC family exhibits a different, individual substrate specificity and function in vivo. HDAC8 interacts with PEPB2-MYH11, a fusion protein consisting of the 165 N-terminal residues of CBF-beta (PEPB2) with the tail region of MYH11 produced by the inversion Inv(16)(p13q22), a translocation associated with acute myeloid leukemia of M4EO subtype. The PEPB2-MYH1 fusion protein also interacts with RUNX1, a well known transcriptional regulator, suggesting that the interaction with HDAC8 may participate to convert RUNX1 into a constitutive transcriptional repressor.

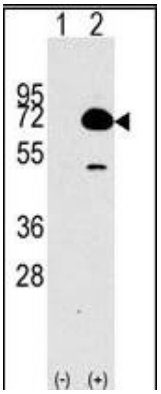
References

Keedy, K.S. et al. J Virol. May; 83(10): 4749?756(2009).
Tong, J.J., et al., Nucleic Acids Res. 30(5):1114-1123 (2002).
Fischer, D.D., et al., J. Biol. Chem. 277(8):6656-6666 (2002).
Guardiola, A.R., et al., J. Biol. Chem. 277(5):3350-3356 (2002).
Kao, H.Y., et al., J. Biol. Chem. 277(1):187-193 (2002).

Images



Western blot analysis of anti-HDAC10 Pab (Cat. AP1110a) in A375 cell line lysates. HDAC10(arrow) was detected using the purified Pab.



Western blot analysis of HDAC10 (arrow) using rabbit polyclonal HDAC10 Antibody (N-term) (RB02583). 293 cell lysates (2 ug/lane) either nontransfected (Lane 1) or transiently transfected with the HDAC10 gene (Lane 2) (Origene Technologies).

Citations

- A limited group of class I histone deacetylases acts to repress human immunodeficiency virus type 1 expression.