10320 Camino Santa Fe, Suite A
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

HDAC4 + 5 + 9 Polyclonal Antibody
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP54308

Specification

HDAC4 + 5 + 9 Polyclonal Antibody - Product Information

Application	**IHC-P, IHC-F, IF, ICC, E**
Primary Accession	P56524/Q9UQL6/Q9UKV0
Reactivity	**Rat, Pig, Bovine**
Host	**Rabbit**
Clonality	**Polyclonal**
Calculated MW	**119/122/111 KDa**
Physical State	**Liquid**
Immunogen	**KLH conjugated synthetic peptide derived from human HDAC4 + 5 + 9**
Epitope Specificity	**651-750/1084**
Isotype	**IgG**
Purity affinity purified by Protein A	
Buffer	**0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.**
SUBCELLULAR 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.**
SIMILARITY	**Belongs to the histone deacetylase family. HD type 2 subfamily.**
SUBUNIT	**Interacts with HDAC7. Homodimer. Homodimerization via its N-terminal domain. Interacts with MEF2C, AHRR, and NR2C1. Interacts with a 14-3-3 chaperone protein in a phosphorylation dependent manner. Interacts with BTBD14B. Interacts with KDM5B. Interacts with MYOCD. Interacts with MORC2. Interacts with ANKRA2.**
Post-translational modifications	**Phosphorylated by CaMK4 at Ser-246, Ser-467 and Ser-632. Phosphorylation at other residues by CaMK2D is required for the interaction with 14-3-3. Phosphorylation at Ser-350 impairs the binding of ANKRA2 but generates a**

	high-affinity docking site for 14-3-3. Sumoylation on Lys-559 is promoted by the E3 SUMO-protein ligase RANBP2, and prevented by phosphorylation by CaMK4.
DISEASE	**Brachydactyly-mental retardation syndrome (BDMR) [MIM:600430]: A syndrome resembling the physical anomalies found in Albright hereditary osteodystrophy. Common features are mild facial dysmorphism, congenital heart defects, distinct brachydactyly type E, mental retardation, developmental delay, seizures, autism spectrum disorder, and stocky build. Soft tissue ossification is absent, and there are no abnormalities in parathyroid hormone or calcium metabolism. Note=The disease is caused by mutations affecting the gene represented in this entry.**
Important Note	**This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.**

Background Descriptions
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. [provided by RefSeq, Jul 2008].

HDAC4 + 5 + 9 Polyclonal Antibody - Additional Information

Target/Specificity
Ubiquitous.

Dilution
IHC-P~~N/A<br \>IHC-F~~N/A<br \>IF~~1:50~200<br \>ICC~~N/A<br \>E~~N/A

Storage
Store at -20 ℃ for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 ℃.

HDAC4 + 5 + 9 Polyclonal Antibody - Protein Information

HDAC4 + 5 + 9 Polyclonal 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 Cytomety
- Cell Culture

HDAC4 + 5 + 9 Polyclonal Antibody - Images