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Rabbit Anti-HDAC4 antibody

SL2809R

Product Name:	HDAC4
Chinese Name:	组蛋白去乙酰化酶4抗体
Alias:	HD 4; HD4; HDAC 4; HDAC A; HDACA; Histone Deacetylase 4; Histone Deacetylase A; KIAA0288; EC 3.5.1.98; HA6116; HDA4_CAEEL; Histone deacetylase 4; CeHDA-7; Histone deacetylase 7.
Organism Species:	Rabbit
Clonality:	Polyclonal
React Species:	Human,Mouse,Rat,Chicken,Dog,Cow,Rabbit,
Applications:	ELISA=1:500-1000IHC-P=1:400-800IHC-F=1:400-800IF=1:100-500（Paraffin sections need antigen repair） not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight:	140kDa
Cellular localization:	The nucleuscytoplasmic
Form:	Lyophilized or Liquid
Concentration:	1mg/ml
immunogen:	KLH conjugated synthetic peptide derived from human HDAC4:101-200/1084
Lsotype:	IgG
Purification:	affinity purified by Protein A
Storage Buffer:	0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.
Storage:	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. 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 °C.
PubMed:	PubMed
Product Detail:	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]. **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. **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. **Subcellular Location:** Nucleus. Cytoplasm. 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. The nuclear localization probably depends on sumoylation. **Tissue Specificity:** Ubiquitous. **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:** Defects in HDAC4 are the cause of 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.

Similarity:
Belongs to the histone deacetylase family. HD type 2 subfamily.

SWISS:
P56524

Gene ID:
9759

Database links:

Entrez Gene: 9759 Human

Entrez Gene: 208727 Mouse

Entrez Gene: 363287 Rat

Omim: 605314 Human

SwissProt: P56524 Human

SwissProt: Q6NZM9 Mouse

SwissProt: Q99P99 Rat

Unigene: 20516 Human

Unigene: 318567 Mouse

Unigene: 23483 Rat

Important Note:
This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

组蛋白去乙酰化酶(HDACs)是一组在细胞染色质水平、通过诱导组蛋白去乙酰化来调控包括染色质重组、转录活化或抑制、细胞周期、Cell differentiation及Apoptosis等一系列生物学效应的酶，特别是与细胞活化后的基因转录表达调控有关。