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Anti-HDAC6/Histone Deacetylase 6 Rabbit Monoclonal Antibody

Catalog # ABO13696

Product Information

Application	WB, IHC, IF, ICC, IP
Primary Accession	Q9UBN7
Host	Rabbit
Isotype	Rabbit IgG
Reactivity	Human
Clonality	Monoclonal
Format	Liquid
Description	Anti-HDAC6/Histone Deacetylase 6 Rabbit Monoclonal Antibody . Tested in WB, IHC, ICC/IF, IP applications. This antibody reacts with Human.

Additional Information

Gene ID	10013
Other Names	Histone deacetylase 6, HD6, 3.5.1.98, Protein deacetylase HDAC6, 3.5.1.-, Tubulin-lysine deacetylase HDAC6, 3.5.1.-, HDAC6 {ECO:0000303|PubMed:10220385, ECO:0000312|HGNC:HGNC:14064}
Calculated MW	131419
Application Details	WB 1:5000-1:20000 IHC 1:50-1:200 ICC/IF 1:100-1:500 IP 1:50
Subcellular Localization	Nucleus. Cytoplasm. Perikaryon. Cell projection, dendrite. Cell projection, axon. It is mainly cytoplasmic, where it is associated with microtubules.
Source	Eukaryota
Contents	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.
Clone Names	Clone: HEE-8
Immunogen	A synthesized peptide derived from human HDAC6
Purification	Affinity-chromatography
Storage	Store at -20°C for one year. For short term storage and frequent use, store at 4°C for up to one month. Avoid repeated freeze-thaw cycles.

Protein Information

Name

HDAC6 {ECO:0000303|PubMed:10220385, ECO:0000312|HGNC:HGNC:14064}

Function

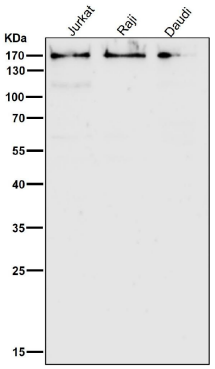
Deacetylates a wide range of non-histone substrates (PubMed: 12024216, PubMed:18606987, PubMed:20308065, PubMed:24882211, PubMed:26246421, PubMed:30538141, PubMed:31857589, PubMed:30770470, PubMed:38534334, PubMed:39567688). Plays a central role in microtubule- dependent cell motility by mediating deacetylation of tubulin (PubMed:12024216, PubMed:20308065, PubMed:26246421). Required for cilia disassembly via deacetylation of alpha-tubulin (PubMed:17604723, PubMed:26246421). Alpha-tubulin deacetylation results in destabilization of dynamic microtubules (By similarity). Promotes deacetylation of CTTN, leading to actin polymerization, promotion of autophagosome-lysosome fusion and completion of autophagy (PubMed:30538141). Deacetylates SQSTM1 (PubMed:31857589). Deacetylates peroxiredoxins PRDX1 and PRDX2, decreasing their reducing activity (PubMed:18606987). Deacetylates antiviral protein RIGI in the presence of viral mRNAs which is required for viral RNA detection by RIGI (By similarity). Sequentially deacetylates and polyubiquitinates DNA mismatch repair protein MSH2 which leads to MSH2 degradation, reducing cellular sensitivity to DNA-damaging agents and decreasing cellular DNA mismatch repair activities (PubMed:24882211). Deacetylates DNA mismatch repair protein MLH1 which prevents recruitment of the MutL alpha complex (formed by the MLH1-PMS2 heterodimer) to the MutS alpha complex (formed by the MSH2-MSH6 heterodimer), leading to tolerance of DNA damage (PubMed:30770470). Deacetylates RHOT1/MIRO1 which blocks mitochondrial transport and mediates axon growth inhibition (By similarity). Deacetylates transcription factor SP1 which leads to increased expression of ENG, positively regulating angiogenesis (PubMed:38534334). Deacetylates KHDRBS1/SAM68 which regulates alternative splicing by inhibiting the inclusion of CD44 alternate exons (PubMed:26080397). Deacetylates PRDM16 (By similarity). Acts as a valine sensor by binding to valine through the primate-specific SE14 repeat region (PubMed:39567688). In valine deprivation conditions, translocates from the cytoplasm to the nucleus where it deacetylates TET2 which promotes TET2-dependent DNA demethylation, leading to DNA damage (PubMed:39567688). Promotes odontoblast differentiation following IPO7-mediated nuclear import and subsequent repression of RUNX2 expression (By similarity). In addition to its protein deacetylase activity, plays a key role in the degradation of misfolded proteins: when misfolded proteins are too abundant to be degraded by the chaperone refolding system and the ubiquitin-proteasome, mediates the transport of misfolded proteins to a cytoplasmic juxtanuclear structure called aggresome (PubMed:17846173). Probably acts as an adapter that recognizes polyubiquitinated misfolded proteins and targets them to the aggresome, facilitating their clearance by autophagy (PubMed:17846173). Involved in the MTA1-mediated epigenetic regulation of ESR1 expression in breast cancer (PubMed:24413532).

Cellular Location

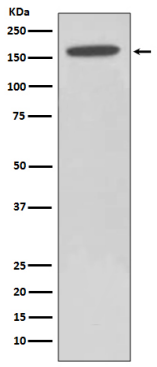
Cytoplasm. Cytoplasm, cytoskeleton. Nucleus. Perikaryon {ECO:0000250|UniProtKB:Q9Z2V5}. Cell projection, dendrite {ECO:0000250|UniProtKB:Q9Z2V5}. Cell projection, axon {ECO:0000250|UniProtKB:Q9Z2V5}. Cell projection, cilium. Cytoplasm, cytoskeleton, microtubule organizing center, centrosome. Cytoplasm, cytoskeleton, cilium basal body Note=Mainly cytoplasmic where it is associated with microtubules (PubMed:12024216). Can shuttle between the cytoplasm and the nucleus (PubMed:39567688). Retained in the cytoplasm by binding to valine via the primate-specific SE14 repeat region while valine deprivation induces nuclear localization (PubMed:39567688). Found exclusively in the cytoplasm in proliferative cells with a fraction found in the

nucleus during differentiation (By similarity). May translocate to the nucleus following DNA damage (PubMed:30770470) {ECO:0000250|UniProtKB:Q9Z2V5, ECO:0000269|PubMed:12024216, ECO:0000269|PubMed:30770470, ECO:0000269|PubMed:39567688}

Images



All lanes use the Antibody at 1:1W dilution for 1 hour at room temperature.



Western blot analysis of HDAC6 expression in HeLa cell lysate.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.