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KD-Validated Anti-Histone deacetylase 6 Rabbit Monoclonal Antibody

Rabbit monoclonal antibody
Catalog # AGI1552

Specification

KD-Validated Anti-Histone deacetylase 6 Rabbit Monoclonal Antibody - Product Information

Application	**WB, FC**
Primary Accession	Q9UBN7
Reactivity	**Human**
Clonality	**Monoclonal**
Isotype	**Rabbit IgG**
Calculated MW	**Predicted, 131 kDa , observed , 160 kDa KDa**
Gene Name	**HDAC6**
Aliases	**HDAC6; Histone Deacetylase 6; HD6; KIAA0901; PPP1R90; JM21; Protein Phosphatase 1, Regulatory Subunit 90; Tubulin-Lysine Deacetylase HDAC6; Alpha-Tubulin Deacetylase HDAC6; EC 3.5.1.98; FLJ16239; EC 3.5.1.-; CPBHM; KDAC6**
Immunogen	**A synthesized peptide derived from human HDAC6**

KD-Validated Anti-Histone deacetylase 6 Rabbit Monoclonal Antibody - Additional Information

Gene ID	**10013**

Other Names
Protein deacetylase HDAC6, 3.5.1.-, E3 ubiquitin-protein ligase HDAC6, 2.3.2.-, Tubulin-lysine deacetylase HDAC6, 3.5.1.-, HDAC6 {ECO:0000303|PubMed:10220385, ECO:0000312|HGNC:HGNC:14064}

KD-Validated Anti-Histone deacetylase 6 Rabbit Monoclonal Antibody - 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:<a

href="http://www.uniprot.org/citations/30770470" target="_blank">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). 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

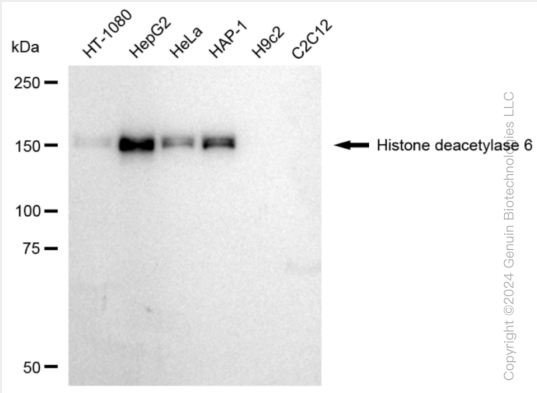
valine via the primate-specific SE14 repeat region while valine deprivation induces nuclear localization (PubMed:39567688). Found exclusively in the cytoplasm in proliferative cells with a fraction found in the nucleus during differentiation (By similarity). May translocate to the nucleus following DNA damage (PubMed:30770470) {ECO:0000250|UniProtKB:Q9Z2V5, ECO:0000269|PubMed:12024216, ECO:0000269|PubMed:30770470, ECO:0000269|PubMed:39567688}

KD-Validated Anti-Histone deacetylase 6 Rabbit Monoclonal Antibody - Protocols

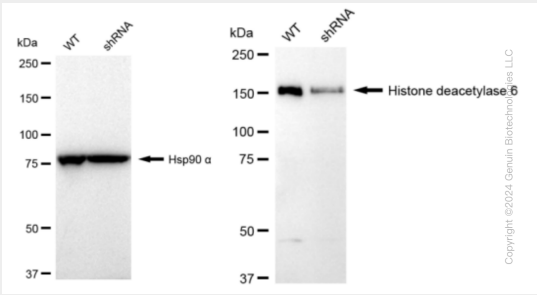
Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

KD-Validated Anti-Histone deacetylase 6 Rabbit Monoclonal Antibody - Images



Western blotting analysis using anti-Histone deacetylase 6 antibody (Cat#AGI1552). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with anti-Histone deacetylase 6 antibody (Cat#AGI1552, 1:20,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Western blotting analysis using anti-Histone deacetylase 6 antibody (Cat#AGI1552). Histone deacetylase 6 expression in wild type (WT) and Histone deacetylase 6 shRNA knockdown (KD) HT-1080 cells with 30 µg of total cell lysates. Hsp90 α serves as a loading control. The blot was incubated with anti-Histone deacetylase 6 antibody (Cat#AGI1552, 1:20,000) and HRP-conjugated

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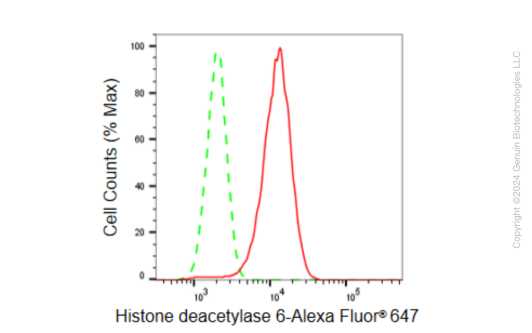
goat anti-rabbit secondary antibody respectively.



Flow cytometric analysis of Histone deacetylase 6 expression in HepG2 cells using Histone deacetylase 6 antibody (Cat#AGI1552, 1:2,000). Green, isotype control; red, Histone deacetylase 6.