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#10831

HDAC7 (E708V) Rabbit mAb



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Entrez-Gene ID #51564
UniProt ID #Q8WUI4

New 08/18

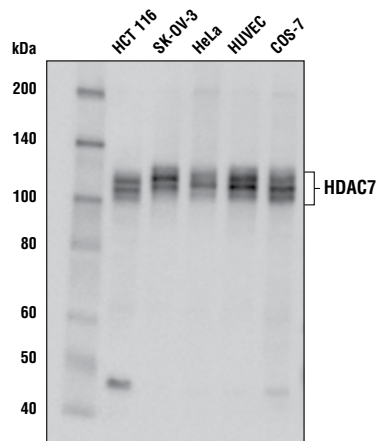
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Applications	Species Cross-Reactivity*	Molecular Wt.	Isotype
W, IP, IF-IC Endogenous	H, Mk	124 kDa	Rabbit IgG**

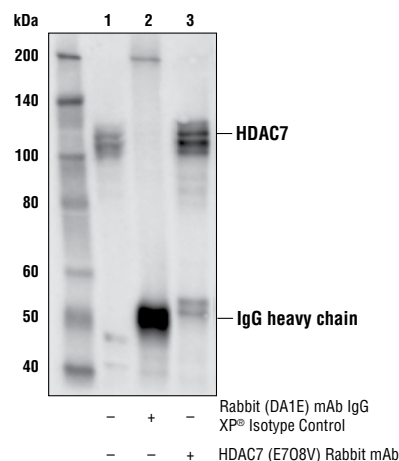
Background: Acetylation of the histone tail causes chromatin to adopt an "open" conformation, allowing increased accessibility of transcription factors to DNA. The identification of histone acetyltransferases (HATs) and their large multiprotein complexes has yielded important insights into how these enzymes regulate transcription (1,2). HAT complexes interact with sequence-specific activator proteins to target specific genes. In addition to histones, HATs can acetylate nonhistone proteins, suggesting multiple roles for these enzymes (3). In contrast, histone deacetylation promotes a "closed" chromatin conformation and typically leads to repression of gene activity (4). Mammalian histone deacetylases can be divided into three classes on the basis of their similarity to various yeast deacetylases (5). Class I proteins (HDACs 1, 2, 3, and 8) are related to the yeast Rpd3-like proteins, those in class II (HDACs 4, 5, 6, 7, 9, and 10) are related to yeast Hda1-like proteins, and class III proteins are related to the yeast protein Sir2. Inhibitors of HDAC activity are now being explored as potential therapeutic cancer agents (6,7).

Specificity/Sensitivity: HDAC7 (E708V) Rabbit mAb recognizes endogenous levels of total HDAC7 protein. This antibody does not cross-react with other HDAC proteins, including HDAC4 and HDAC5.

Source/Purification: Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Gly60 of human HDAC7 protein.



Western blot analysis of extracts from various cell lines using HDAC7 (E708V) Rabbit mAb.



Immunoprecipitation of HDAC7 from HCT 116 cell extracts. Lane 1 is 10% input, lane 2 is Rabbit (DA1E) mAb IgG XP® Isotype Control #3900, and lane 3 is HDAC7 (E708V) Rabbit mAb. Western blot analysis was performed using HDAC7 (E708V) Rabbit mAb.

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

*Species cross-reactivity is determined by western blot.

**Anti-rabbit secondary antibodies must be used to detect this antibody.

Recommended Antibody Dilutions:

Western blotting	1:1000
Immunoprecipitation	1:100
Immunofluorescence (IF-IC)	1:100
Fixative:	4% Formaldehyde
Permeabilization:	0.3% Triton X-100

For product specific protocols and a complete listing of recommended companion products please see the product web page at www.cellsignal.com.

Background References:

- (1) Marmorstein, R. (2001) *Cell Mol Life Sci* 58, 693-703.
- (2) Gregory, P.D. et al. (2001) *Exp Cell Res* 265, 195-202.
- (3) Liu, Y. et al. (2000) *Mol Cell Biol* 20, 5540-53.
- (4) Cress, W.D. and Seto, E. (2000) *J Cell Physiol* 184, 1-16.
- (5) Gray, S.G. and Ekström, T.J. (2001) *Exp Cell Res* 262, 75-83.
- (6) Thiagalingam, S. et al. (2003) *Ann. N.Y. Acad. Sci.* 983, 84-100.
- (7) Vigushin, D.M. and Coombes, R.C. (2004) *Curr Cancer Drug Targets* 4, 205-18.

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IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween®20 at 4°C with gentle shaking, overnight.

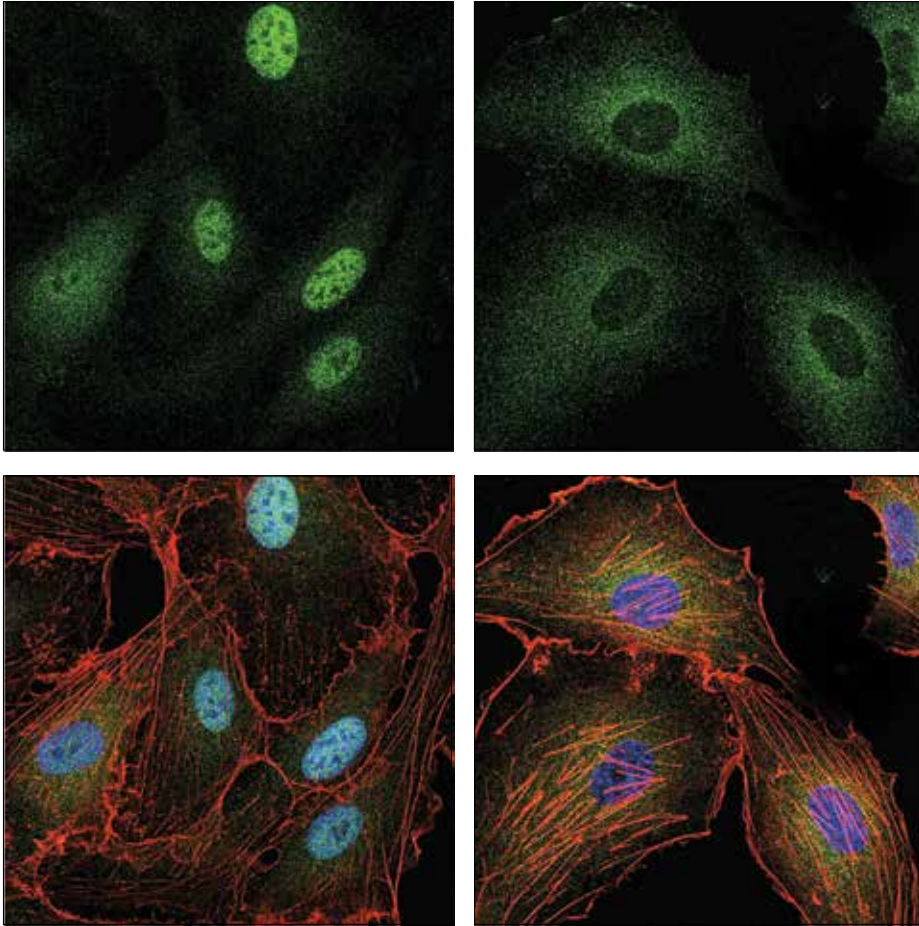
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Applications: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide Species Cross-Reactivity: H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine Dg—dog Pg—pig Sc—S. cerevisiae Ce—C. elegans Hr—Horse All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.



Confocal immunofluorescent analysis of HUVEC cells, untreated (left) or treated with TPA #4174 (10 ng/mL, 4 hr; right) to promote cytoplasmic accumulation, using HDAC7 (E708V) Rabbit mAb (green). Actin filaments were labeled with DyLight™ 554 Phalloidin #13054 (red). Cells were mounted in ProLong® Gold Antifade Reagent with DAPI #8961 (blue).

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