

#2545 Store at -20°C

HDAC2 Antibody


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Applications: WB, IP	Reactivity: H M Mk	Sensitivity: Endogenous	MW (kDa): 60	Source: Rabbit	UniProt ID: #Q92769	Entrez-Gene Id: 3066
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Product Usage Information	Application Western Blotting Immunoprecipitation	Dilution 1:1000 1:50
Storage	Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at –20°C. Do not aliquot the antibody.	
Specificity / Sensitivity	HDAC2 Antibody detects endogenous levels of total HDAC2 protein and is the preferred antibody for immunoprecipitation. The antibody does not cross-react with other HDAC proteins.	
Source / Purification	Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to the carboxy terminus of the human HDAC2 protein. Antibodies are purified by peptide affinity chromatography.	
Background	<p>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).</p> <p>HDAC1 and HDAC2 are highly homologous and are involved in histone deacetylation, chromatin remodeling and transcriptional repression (8-10). Both proteins are found together in numerous complexes including the nucleosome remodeling and deacetylation complex (NuRD), MeCP1, and the mSin3A corepressor complex.</p>	
Background References	<ol style="list-style-type: none"> Marmorstein, R. (2001) <i>Cell Mol Life Sci</i> 58, 693-703. Gregory, P.D. et al. (2001) <i>Exp Cell Res</i> 265, 195-202. Liu, Y. et al. (2000) <i>Mol Cell Biol</i> 20, 5540-53. Cress, W.D. and Seto, E. (2000) <i>J Cell Physiol</i> 184, 1-16. Gray, S.G. and Ekström, T.J. (2001) <i>Exp Cell Res</i> 262, 75-83. Thiagalingam, S. et al. (2003) <i>Ann. N.Y. Acad. Sci.</i> 983, 84-100. Vigushin, D.M. and Coombes, R.C. (2004) <i>Curr Cancer Drug Targets</i> 4, 205-18. Zhang, Y. et al. (1999) <i>Genes Dev.</i> 13, 1924-1935. Ng, H.H. et al. (1999) <i>Nat. Genet.</i> 23, 58-61. Zhang, Y. et al. (1997) <i>Cell</i> 89, 357-364. 	

Species Reactivity	Species reactivity is determined by testing in at least one approved application (e.g., western blot).
Western Blot Buffer	IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.
Applications Key	WB: Western Blotting IP: Immunoprecipitation

Cross-Reactivity Key

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **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
GP: Guinea Pig **Rab:** rabbit **All:** all species expected

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