

#9928 Store at -20°C

Histone Deacetylase (HDAC) Antibody Sampler Kit

1 Kit (6 x 20 microliters)



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Product Includes	Product #	Quantity	Mol. Wt	Isotype/Source
HDAC1 (10E2) Mouse mAb	5356	20 µl	62 kDa	Mouse IgG1
HDAC2 (3F3) Mouse mAb	5113	20 µl	60 kDa	Mouse IgG1
HDAC3 (7G6C5) Mouse mAb	3949	20 µl	49 kDa	Mouse IgG2a
HDAC4 (D15C3) Rabbit mAb	7628	20 µl	140 kDa	Rabbit IgG
Phospho-HDAC4 (Ser246)/HDAC5 (Ser259)/HDAC7 (Ser155) (D27B5) Rabbit mAb	3443	20 µl	140, 124 kDa	Rabbit IgG
HDAC6 (D2E5) Rabbit mAb	7558	20 µl	160 kDa	Rabbit IgG
Anti-rabbit IgG, HRP-linked Antibody	7074	100 µl		Goat
Anti-mouse IgG, HRP-linked Antibody	7076	100 µl		Horse

Please visit cellsignal.com for individual component applications, species cross-reactivity, dilutions, protocols, and additional product information.

Description

The Histone Deacetylase (HDAC) Antibody Sampler Kit provides a fast and economical means to evaluate the endogenous levels of HDACs. The kit contains enough primary and secondary antibodies to perform two Western blot experiments.

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.

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).

Background References

1. Marmorstein, R. (2001) *Cell Mol Life Sci* 58, 693-703.
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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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