

Histone Deacetylase 3 monoclonal antibody

Catalog: MB66542

Host: Mouse

Reactivity: Human, Mouse, Rat

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 multi-protein complexes has yielded important insights into how these enzymes regulate transcription. 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. In contrast, histone deacetylation promotes a "closed" chromatin conformation and typically leads to repression of gene activity. Mammalian histone deacetylases can be divided into three classes on the basis of their similarity to various yeast deacetylases. 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.

HDAC3 is a nuclear and cytoplasmic protein that deacetylates both histone (H2A, H3, H4) and non-histone substrates (RelA, SRY, p53, MEF2, PCAF and p300/CBP). HDAC3 deacetylase activity is stimulated by interactions with the N-CoR and SMRT co-repressor proteins. Together, these three proteins form a functional complex that represses transcription associated with nuclear hormone receptors and other transcription factors, including Rev-Erb, COUP-TF, DAX1, MAD and Pit-1. Phosphorylation of HDAC3 on Ser424 by casein kinase 2 (CK2) also increases HDAC3 deacetylase activity. Subsequently, de-phosphorylation by protein phosphatase 4 (PP4) decreases HDAC3 activity.

Product:

Liquid in PBS containing 50% glycerol, 0.5% BSA and

0.02% sodium azide, pH 7.3.

Molecular Weight:

~ 49 kDa

Swiss-Prot:

O15379

Purification&Purity:

The antibody was purified by immunogen affinity chromatography.

Applications:

WB (1/500 - 1/1000)

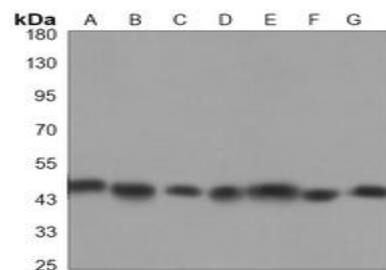
Storage&Stability:

Store at 4 °C short term. Aliquot and store at -20 °C long term. Avoid freeze-thaw cycles.

Specificity:

Recognizes endogenous levels of Histone Deacetylase 3 protein.

DATA:



Western blot analysis of Histone Deacetylase 3 expression in THP1 (A), LNCAP (B), MCF7 (C), PC12 (D), 293T (E), Jurkat (F), NIH3T3 (G) whole cell lysates.

Note:

For research use only, not for use in diagnostic procedure.

Bioworld Technology, Inc.

Add: 1660 South Highway 100, Suite 500 St. Louis Park, MN 55416, USA.

Email: info@bioworld.com

Tel: 6123263284

Fax: 6122933841

Bioworld technology, co. Ltd.

Add: No 9, weidi road Qixia District Nanjing, 210046, P. R. China.

Email: info@biogot.com

Tel: 0086-025-68037686

Fax: 0086-025-68035151



PRODUCT DATA SHEET

Bioworld Technology, Inc.

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Add: 1660 South Highway 100, Suite 500 St. Louis Park,
MN 55416, USA.

Email: info@bioworld.com

Tel: 6123263284

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