

**Mouse Anti-HDAC1/HD1 [10E2]: MC0177**

**Intended Use:** For Research Use Only

**Description:** 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. HAT complexes interact with sequence-specific activator proteins to target specific genes. In addition to histones, HATs can acetylate non-histone 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 (HDACs 1, 2, 3 and 8) proteins 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.

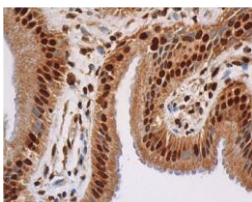
**Specifications**

Clone: 10E2  
 Source: Mouse  
 Isotype: IgG1k  
 Localization: Nucleus, cytoplasm  
 Reactivity: Human, mouse, rat  
 Formulation: Purified antibody in PBS 7.4, containing BSA and ≤ 0.09% sodium azide (NaN<sub>3</sub>)  
 Storage: Store at 2°- 8°C  
 Applications: IHC, ELISA, IF, IP, WB  
 Package:

Description	Catalog No.	Size
HDAC1/HD1 Concentrated	MC0177	1 ml

**IHC Procedure\***

Positive Control Tissue: Breast carcinoma. ICC/IF: HAP1-HDAC1 cells (wildtype and knockout cells)  
 Concentrated Dilution: 50-200  
 Pretreatment: Citrate pH6.0 or EDTA pH8.0, 15 minutes using Pressure Cooker, or 30-60 minutes using water bath at 95°-99°C  
 Incubation Time and Temp: 30-60 minutes @ RT  
 Detection: Refer to the detection system manual  
 \* Result should be confirmed by an established diagnostic procedure.



FFPE human gall bladder tissue stained with anti-HDAC1 using DAB

**References:**

1. HDAC and Proteasome Inhibitors Synergize to Activate Pro-Apoptotic Factors in Synovial Sarcoma. Laporte, A. N., et al. In PLoS ONE on 6 January 2017.
2. Histone Deacetylase Inhibitor Trichostatin A Promotes the Apoptosis of Osteosarcoma Cells through p53 Signaling Pathway Activation. by Deng, Z., Liu, X., et al. In International Journal of Biological Sciences on 24 November 2016.
3. HDAC 1 and 6 modulate cell invasion and migration in clear cell renal cell carcinoma. Ramakrishnan, S., et al. In BMC Cancer on 11 August 2016.
4. HDAC 3-selective inhibitor RGFP966 demonstrates anti-inflammatory properties in RAW 264.7 macrophages and mouse precision-cut lung slices by attenuating NF-κB p65 transcriptional activity. Leus, N. G., et al. In Biochemical Pharmacology on 15 May 2016.