

HDAC3 Antibody

Catalog No: #32620

Package Size: #32620-1 50ul #32620-2 100ul

Orders: order@signalwayantibody.com

Support: tech@signalwayantibody.com

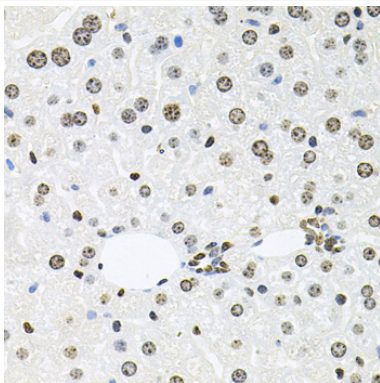
Description

Product Name	HDAC3 Antibody
Host Species	Rabbit
Clonality	Polyclonal
Purification	Antibodies were purified by affinity purification using immunogen.
Applications	WB,IHC,IF
Species Reactivity	Human,Mouse,Rat
Specificity	The antibody detects endogenous level of total HDAC3 protein.
Immunogen Type	Peptide
Immunogen Description	A synthetic peptide of human HDAC3.
Target Name	HDAC3
Other Names	HD3; RPD3; RPD3-2;
Accession No.	Swiss-Prot:O15379NCBI Gene ID:8841
Uniprot	O15379
GeneID	8841;
SDS-PAGE MW	49KD
Concentration	1.0mg/ml
Formulation	Supplied at 1.0mg/mL in phosphate buffered saline (without Mg ²⁺ and Ca ²⁺), pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Storage	Store at -20°C

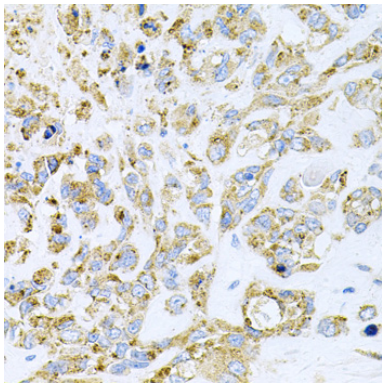
Application Details

WB □ 1:500 - 1:2000 IHC □ 1:50 - 1:200 IF □ 1:50 - 1:200

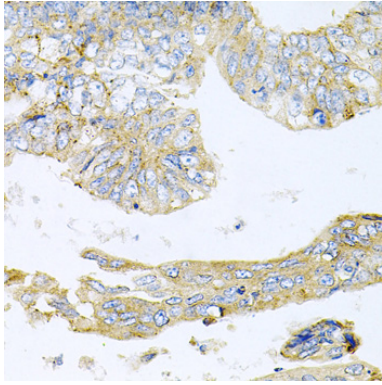
Images



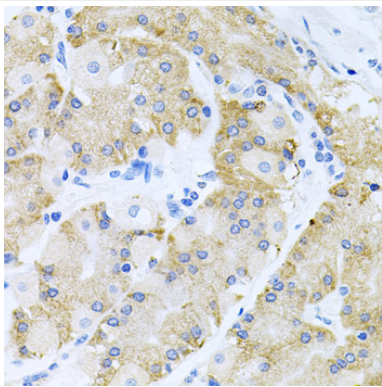
Immunohistochemistry of paraffin-embedded mouse liver using HDAC3 at dilution of 1:100 (40x lens).



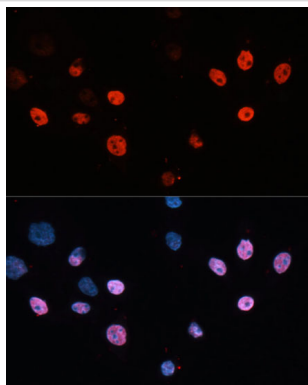
Immunohistochemistry of paraffin-embedded human lung cancer using HDAC3 at dilution of 1:100 (40x lens).



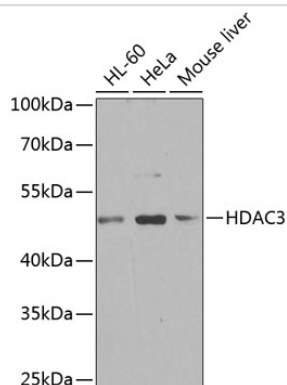
Immunohistochemistry of paraffin-embedded human colon carcinoma using HDAC3 at dilution of 1:100 (40x lens).



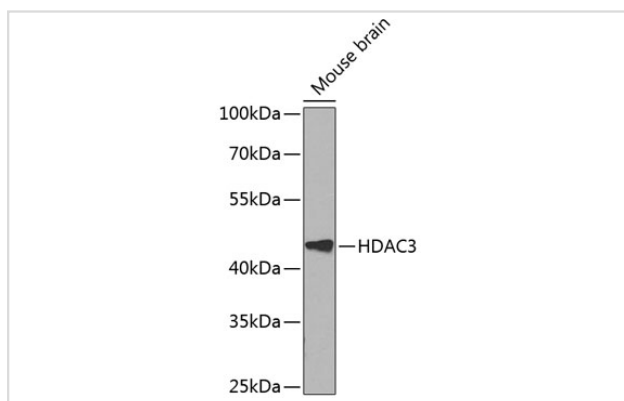
Immunohistochemistry of paraffin-embedded human stomach using HDAC3 at dilution of 1:100 (40x lens).



Immunofluorescence analysis of HeLa cells using HDAC3 Polyclonal at dilution of 1:100 (40x lens). Blue: DAPI for nuclear staining.



Western blot analysis of extracts of various cell lines, using HDAC3 at 1:1000 dilution.



Western blot analysis of extracts of mouse brain, using HDAC3 at 1:1000 dilution.

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).

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) (8). 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 (8,9). Phosphorylation of HDAC3 on Ser424 by casein kinase 2 (CK2) also increases HDAC3 deacetylase activity (9). Subsequently, de-phosphorylation by protein phosphatase 4 (PP4) decreases HDAC3 activity (9).

Note: This product is for in vitro research use only