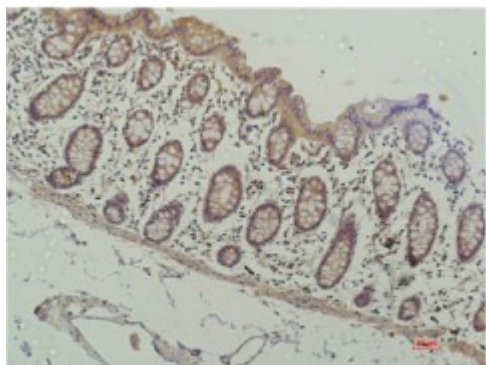


Anti-HDAC1 antibody



Description

HDAC1 is a protein encoded by the HDAC1 gene which is approximately 55,1 kDa. HDAC1 is localised to the nucleus. It is involved in notch signalling pathways and p53 signalling. This protein falls under the histone deacetylase family and is a component of the histone deacetylase complex. Histone acetylation and deacetylation plays a key role in the regulation of eukaryotic gene expression. It also interacts with a retinoblastoma tumour-suppressor protein which forms a complex that is key in controlling cell proliferation and differentiation. HDAC1 is ubiquitously expressed with higher levels in heart, pancreas and testis. Mutations in the HDAC1 gene may result in Rett syndrome. STJ97722 was developed from clone 4E1 and was affinity-purified from mouse ascites by affinity-chromatography using specific immunogen. This primary antibody detects endogenous levels of HDAC1.

Model	STJ97722
Host	Mouse
Reactivity	Human, Mouse, Rat
Applications	IHC
Immunogen	synthetic peptide derived from HDAC1
Gene ID	3065
Gene Symbol	HDAC1
Dilution range	IHC 1:100-200
Specificity	HDAC1 Mouse Monoclonal Antibody (4E1) detects endogenous levels of HDAC1

Tissue Specificity	Ubiquitous, with higher levels in heart, pancreas and testis, and lower levels in kidney and brain.
Purification	The antibody was affinity-purified from mouse ascites by affinity-chromatography using specific immunogen.
Clone ID	40
Note	For Research Use Only (RUO).
Protein Name	Histone deacetylase 1 HD1
Clonality	Monoclonal
Conjugation	Unconjugated
Isotype	IgG1
Formulation	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
Concentration	1 mg/ml
Storage Instruction	Store at -20°C, and avoid repeat freeze-thaw cycles.
Database Links	HGNC:4852OMIM:601241
Alternative Names	Histone deacetylase 1 HD1
Function	<p>Responsible for the deacetylation of lysine residues on the N-terminal part of the core histones (H2A, H2B, H3 and H4). Histone deacetylation gives a tag for epigenetic repression and plays an important role in transcriptional regulation, cell cycle progression and developmental events. Histone deacetylases act via the formation of large multiprotein complexes. Deacetylates SP proteins, SP1 and SP3, and regulates their function. Component of the BRG1-RB1-HDAC1 complex, which negatively regulates the CREST-mediated transcription in resting neurons. Upon calcium stimulation, HDAC1 is released from the complex and CREBBP is recruited, which facilitates transcriptional activation. Deacetylates TSHZ3 and regulates its transcriptional repressor activity. Deacetylates 'Lys-310' in RELA and thereby inhibits the transcriptional activity of NF-kappa-B. Deacetylates NR1D2 and abrogates the effect of KAT5-mediated relieving of NR1D2 transcription repression activity. Component of a RCOR/GFI/KDM1A/HDAC complex that suppresses, via histone deacetylase (HDAC) recruitment, a number of genes implicated in multilineage blood cell development. Involved in CIART-mediated transcriptional repression of the circadian transcriptional activator: CLOCK-ARNTL/BMAL1 heterodimer. Required for the transcriptional repression of circadian target genes, such as PER1, mediated by the large PER complex or CRY1 through histone deacetylation.</p>
Cellular Localization	Nucleus
Post-translational Modifications	<p>Sumoylated on Lys-444 and Lys-476; which promotes enzymatic activity. Desumoylated by SENP1. Phosphorylation on Ser-421 and Ser-423 promotes enzymatic activity and interactions with NuRD and SIN3 complexes. Phosphorylated by CDK5. Ubiquitinated by CHFR, leading to its degradation by the proteasome. Ubiquitinated by KCTD11, leading to proteasomal degradation.</p>

