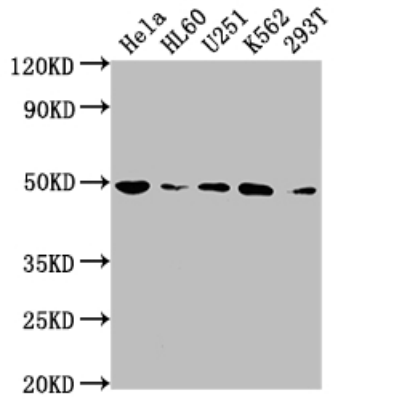
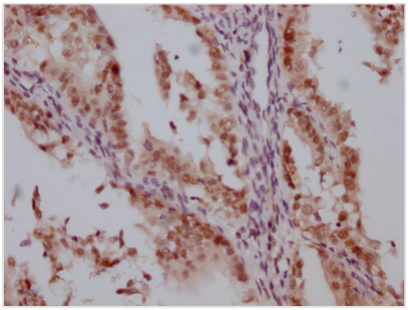
HDAC3 Recombinant Monoclonal Antibody

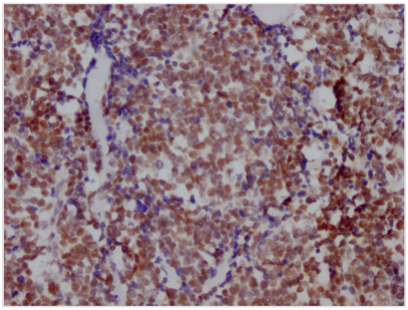
Product Code	CSB-RA906662A0HU
Storage	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.
Uniprot No.	O15379
Immunogen	A synthesized peptide derived from human HDAC3
Species Reactivity	Human
Tested Applications	ELISA, WB, IHC; Recommended dilution: WB:1:500-1:5000, IHC:1:50-1:200
Relevance	Responsible for the deacetylation of lysine residues on the N-terminal part of the core histones (H2A, H2B, H3 and H4), and some other non-histone substrates. 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. Participates in the BCL6 transcriptional repressor activity by deacetylating the H3 'Lys-27' (H3K27) on enhancer elements, antagonizing EP300 acetyltransferase activity and repressing proximal gene expression. Probably participates in the regulation of transcription through its binding to the zinc-finger transcription factor YY1; increases YY1 repression activity. Required to repress transcription of the POU1F1 transcription factor. Acts as a molecular chaperone for shuttling phosphorylated NR2C1 to PML bodies for sumoylation (PubMed:21444723, PubMed:23911289). Contributes, together with XBP1 isoform 1, to the activation of NFE2L2-mediated HMOX1 transcription factor gene expression in a PI(3)K/mTORC2/Akt-dependent signaling pathway leading to endothelial cell (EC) survival under disturbed flow/oxidative stress (PubMed:25190803).
Form	Liquid
Conjugate	Non-conjugated
Storage Buffer	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Purification Method	Affinity-chromatography
Isotype	Rabbit IgG
Clonality	Monoclonal
Product Type	Recombinant Antibody
Immunogen Species	Homo sapiens (Human)
Research Area	Epigenetics and Nuclear Signaling; Cancer; Cardiovascular; Metabolism; Stem cells
Gene Names	HDAC3
Clone No.	4D4
Image	



Western Blot
Positive WB detected in: Hela whole cell lysate, HL60 whole cell lysate, U251 whole cell lysate, K562 whole cell lysate, 293T whole cell lysate
All lanes: HDAC3 antibody at 1:2000
Secondary
Goat polyclonal to rabbit IgG at 1/50000 dilution
Predicted band size: 49, 50 kDa
Observed band size: 49 kDa



IHC image of CSB-RA906662A0HU diluted at 1:100 and staining in paraffin-embedded human endometrial cancer performed on a Leica BondTM system. After dewaxing and hydration, antigen retrieval was mediated by high pressure in a citrate buffer (pH 6.0). Section was blocked with 10% normal goat serum 30min at RT. Then primary antibody (1% BSA) was incubated at 4? overnight. The primary is detected by a Goat anti-rabbit IgG polymer labeled by HRP and visualized using 0.05% DAB.



IHC image of CSB-RA906662A0HU diluted at 1:100 and staining in paraffin-embedded human lung cancer performed on a Leica BondTM system. After dewaxing and hydration, antigen retrieval was mediated by high pressure in a citrate buffer (pH 6.0). Section was blocked with 10% normal goat serum 30min at RT. Then primary antibody (1% BSA) was incubated at 4? overnight. The primary is detected by a Goat anti-rabbit IgG polymer labeled by HRP and visualized using 0.05% DAB.

Description

The first step in the preparation of recombinant HDAC3 antibody is to obtain the HDAC3 antibody gene. The heavy and light chain genes of the antibody were constructed into a plasma vector and then transfected into suspended mammalian cells transiently. After expression verification, cell supernatant was collected in expanded culture and purified recombinant HDAC3 antibody was obtained using affinity-chromatography. This recombinant HDAC3 antibody has been validated for the detection of HDAC3 protein from Human in the ELISA, WB, IHC.

HDAC3 is involved in the regulation of gene transcription, chromatin remodeling, and genomic stability. Under physiological conditions, HDAC3 contributes to modulating rhythms, metabolism, and development. The involvement of HDAC3 has been found in various diseases, including ischemic injury, fibrosis, neurodegeneration, infections, and inflammatory conditions. HDAC3 is required for lymphopoiesis and hematopoietic cell fate decisions. Studies have shown

that HDAC3 influences cancer cell responses to anti-cancer drugs, angiogenic potential, and tumorigenic potential in interaction with cancer-associated genes (CAGE), specifically the cancer/testis antigen gene.