# Anti-HDAC9 antibody ab59718

**Product name**  
Anti-HDAC9 antibody

**Description**  
Rabbit polyclonal to HDAC9

**Host species**  
Rabbit

**Specificity**  
This antibody recognises Histone deacetylase 9 isoform 3, also known as HDRP, isoforms 8, 9, 10 and 11.

**Tested applications**  
Suitable for: WB, IHC-P, ChIP, ELISA, IHC-Fr

**Species reactivity**  
Reacted with: Mouse, Human

**Predicted to work with:** Sheep, Chicken, Guinea pig, Dog

**Immunogen**  
A region within synthetic peptide: QVGAVKVKKE PVDSDEAQI QEMESGEQAA FMQVIGKDL APGFVIKVII, corresponding to C terminal amino acids 541-590 of Human HDAC9

**Positive control**  
A172 cell lysate or human kidney tissue.

## Properties

**Form**  
Liquid

**Storage instructions**  
Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.

**Storage buffer**  
Preservative: 0.09% Sodium azide  
Constituents: 2% Sucrose, PBS

**Purity**  
Protein A purified

**Clonality**  
Polyclonal

**Isotype**  
IgG

## Applications

Our Abpromise guarantee covers the use of ab59718 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.
Function

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. Represses MEF2-dependent transcription. Isoform 3 lacks active site residues and therefore is catalytically inactive. Represses MEF2-dependent transcription by recruiting HDAC1 and/or HDAC3. Seems to inhibit skeletal myogenesis and to be involved in heart development. Protects neurons from apoptosis, both by inhibiting JUN phosphorylation by MAPK10 and by repressing JUN transcription via HDAC1 recruitment to JUN promoter.

Tissue specificity

Broadly expressed, with highest levels in brain, heart, muscle and testis. Isoform 3 is present in human bladder carcinoma cells (at protein level).

Involvement in disease

Note=A chromosomal aberration involving HDAC9 is found in a family with Peters anomaly. Translocation t(1;7)(q41;p21) with TGFB2 resulting in lack of HDAC9 protein.

Sequence similarities

Belongs to the histone deacetylase family. HD type 2 subfamily.

Post-translational modifications

Phosphorylated on Ser-220 and Ser-450; which promotes 14-3-3-binding, impairs interaction with MEF2, and antagonizes antimyogenic activity. Phosphorylated on Ser-240; which impairs nuclear accumulation (By similarity). Isoform 7 is phosphorylated on Tyr-1010. Phosphorylated by the PKC kinases PKN1 and PKN2, impaining nuclear import. Sumoylated.

Cellular localization

Nucleus.

Target

Function

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Images
Western blot - Anti-HDAC9 antibody (ab59718)

Anti-HDAC9 antibody (ab59718) at 1.25 µg/ml + A172 cell lysate at 10 µg

**Secondary**
HRP conjugated anti-Rabbit IgG used at 1/50000

**Predicted band size:** 66 kDa  
**Observed band size:** 50 kDa  
why is the actual band size different from the predicted?

ChIP - Anti-HDAC9 antibody (ab59718)

ChIP analysis using ab59718 (0.5µg/mL) binding HDAC9 in human HCT116 colon cancer cells. Without (- peptide) and with (+ peptide) blocking peptide. Protein binding was detected using real-time PCR.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-HDAC9 antibody (ab59718)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human kidney tissue labelling HDAC9 with ab59718 at 4µg/ml. Epithelial cells of the renal tubule were positively labelled (indicated with arrows).

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