

Anti-HDAC2 antibody - C-terminal ab227149

[1 References](#) [7 Images](#)

Overview

Product name	Anti-HDAC2 antibody - C-terminal
Description	Rabbit polyclonal to HDAC2 - C-terminal
Host species	Rabbit
Tested applications	Suitable for: ChIP, IHC-P, WB, ICC/IF, IP
Species reactivity	Reacts with: Mouse, Rat, Human
Immunogen	Synthetic peptide within Human HDAC2 (C terminal). The exact sequence is proprietary. (Carrier-protein conjugated). Database link: Q92769
Positive control	ICC/IF: HeLa cells. WB: HEK-293T, A431, HeLa and HepG2 whole cell extracts; C2C12 and Rat2 whole cell lysates. IP: HeLa whole cell lysate. ChIP: HEK-293T whole cell lysate/extract. IHC-P: Cal27 xenograft tissue.
General notes	<p>The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.</p> <p>If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As</p>

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 long term. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.00 Preservative: 0.01% Thimerosal (merthiolate) Constituents: 1.21% Tris, 0.75% Glycine, 10% Glycerol (glycerin, glycerine)
Purity	Immunogen affinity purified
Clonality	Polyclonal
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab227149 in the following tested applications.

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

Application	Abreviews	Notes
ChIP		Use at an assay dependent concentration.
IHC-P		1/100 - 1/1000.
WB		1/500 - 1/3000. Predicted molecular weight: 55 kDa.
ICC/IF		1/100 - 1/1000.
IP		1/100 - 1/500.

Target

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. Histone deacetylases act via the formation of large multiprotein complexes. Forms transcriptional repressor complexes by associating with MAD, SIN3, YY1 and N-COR. Interacts in the late S-phase of DNA-replication with DNMT1 in the other transcriptional repressor complex composed of DNMT1, DMAP1, PCNA, CAF1. Deacetylates TSHZ3 and regulates its transcriptional repressor activity.

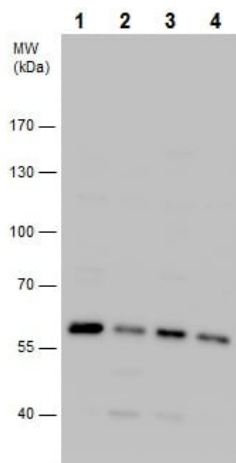
Tissue specificity Widely expressed; lower levels in brain and lung.

Sequence similarities Belongs to the histone deacetylase family. HD type 1 subfamily.

Post-translational modifications S-nitrosylated by GAPDH. In neurons, S-Nitrosylation at Cys-262 and Cys-274 does not affect the enzyme activity but abolishes chromatin-binding, leading to increases acetylation of histones and activate genes that are associated with neuronal development. In embryonic cortical neurons, S-Nitrosylation regulates dendritic growth and branching.

Cellular localization Nucleus.

Images



Western blot - Anti-HDAC2 antibody - C-terminal (ab227149)

All lanes : Anti-HDAC2 antibody - C-terminal (ab227149) at 1/1000 dilution

Lane 1 : HEK-293T (human epithelial cell line from embryonic kidney transformed with large T antigen) whole cell extracts

Lane 2 : A431 (human epidermoid carcinoma cell line) whole cell extracts

Lane 3 : HeLa (human epithelial cell line from cervix adenocarcinoma) whole cell extracts

Lane 4 : HepG2 (human epithelial cell line from cervix adenocarcinoma) whole cell extracts

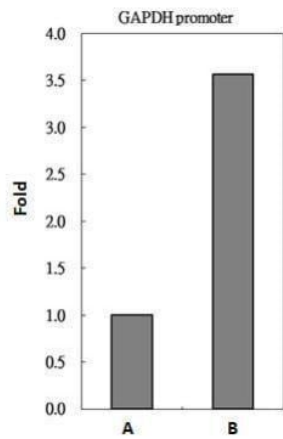
Lysates/proteins at 30 µg per lane.

Secondary

All lanes : HRP-conjugated anti-rabbit IgG antibody

Predicted band size: 55 kDa

7.5% SDS-PAGE gel.



ChIP - Anti-HDAC2 antibody - C-terminal (ab227149)

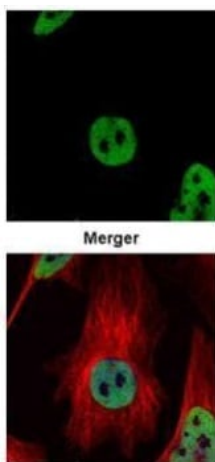
ab227149 immunoprecipitates HDAC2 protein-DNA complex in ChIP experiments.

ChIP Sample: HEK-293T (human epithelial cell line from embryonic kidney transformed with large T antigen) whole cell lysate/extract.

A: 5 µg preimmune rabbit IgG

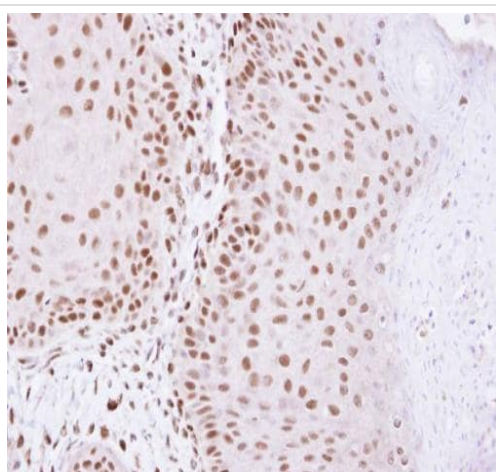
B: 5 µg of ab227149

The precipitated DNA was detected by PCR with primer set targeting to GAPDH promoter.



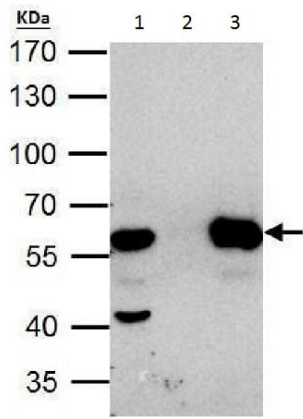
Immunocytochemistry/ Immunofluorescence - Anti-HDAC2 antibody - C-terminal (ab227149)

Paraformaldehyde-fixed HeLa (human epithelial cell line from cervix adenocarcinoma) cells stained for HDAC2 (green) using ab227149 at 1/500 dilution in ICC/IF. Alpha-tubulin filaments were labeled (red).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-HDAC2 antibody - C-terminal (ab227149)

Paraffin embedded Cal27 (human) xenograft tissue stained for HDAC2 using ab227149 at 1/100 dilution in immunohistochemical analysis.



Immunoprecipitation - Anti-HDAC2 antibody - C-terminal (ab227149)

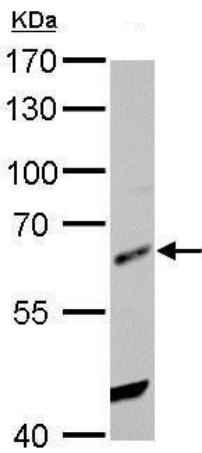
HDAC2 was immunoprecipitated from HeLa (human epithelial cell line from cervix adenocarcinoma) whole cell lysate. Western blot was performed from the immunoprecipitate using ab227149 at 1/1000 dilution. Anti-rabbit IgG was used as a secondary reagent.

Lane 1: 40 µg HeLa whole cell lysate.

Lane 2: Control with 2 µg of preimmune rabbit IgG.

Lane 3: Immunoprecipitation of HDAC2 protein by 2 µg of ab227149.

7.5% SDS-PAGE gel.



Western blot - Anti-HDAC2 antibody - C-terminal (ab227149)

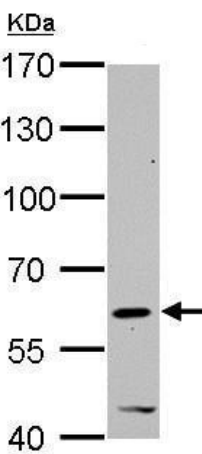
Anti-HDAC2 antibody - C-terminal (ab227149) at 1/1000 dilution + Rat2 (rat fibroblast cell line) whole cell lysate at 30 µg

Secondary

HRP-conjugated anti-rabbit IgG antibody

Predicted band size: 55 kDa

7.5% SDS-PAGE gel.



Western blot - Anti-HDAC2 antibody - C-terminal (ab227149)

Anti-HDAC2 antibody - C-terminal (ab227149) at 1/1000 dilution + C2C12 (mouse myoblast cell line) whole cell lysate at 30 µg

Secondary

HRP-conjugated anti-rabbit IgG antibody

Predicted band size: 55 kDa

7.5% SDS-PAGE gel.

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