abcam

ab232643

Anti-HDAC8 antibody [EPR10338(2)] - BSA and Azide free

Recombinant | RabMAb | KO Validated

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	EPR10338(2)
Purification technique	Affinity purification Protein A
Concentration	1.087 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

WB

Tested

Species	Human
Dilution info	-

Notes	-

Expected

Species	Mouse
Dilution info	Use at an assay dependent concentration.
Notes	-

Predicted

Species	Rat
Dilution info	-
Notes	-

IP

Tested

Species	Human
Dilution info	-
Notes	-

Expected

Species	Mouse
Dilution info	Use at an assay dependent concentration.
Notes	-

Predicted

Species	Rat
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

Expected

Species	Mouse
Dilution info	Use at an assay dependent concentration.
Notes	-

Predicted

Species	Rat
Dilution info	-
Notes	-

Target data

See full target information HDAC8

Function

Histone deacetylase that catalyzes the deacetylation of lysine residues on the N-terminal part of the core histones (H2A, H2B, H3 and H4) (PubMed:10748112, PubMed:10922473, PubMed:10926844, PubMed:14701748, PubMed:28497810). Histone deacetylation gives a tag for epigenetic repression and plays an important role in transcriptional regulation, cell cycle progression and developmental events (PubMed:10748112, PubMed:10922473, PubMed:10926844, PubMed:14701748). Histone deacetylases act via the formation of large multiprotein complexes (PubMed:10748112, PubMed:10922473, PubMed:10926844, PubMed:14701748). Also involved in the deacetylation of cohesin complex protein SMC3 regulating release of cohesin complexes from chromatin (PubMed:22885700). May play a role in smooth muscle cell contractility (PubMed:15772115). In addition to protein deacetylase activity, also has protein-lysine deacylase activity: acts as a protein decrotonylase by mediating decrotonylation ((2E)-butenoyl) of histones (PubMed:28497810).

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C

Appropriate long-term storage conditions	+4°C
Storage information	Do Not Freeze

Notes

ab232643 is the carrier-free version of ab187139.

Patented technology

Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?

This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Conjugation ready

Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with 1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

Compatibility

This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	The protein HDAC8 also known as Histone Deacetylase 8 functions mechanically by removing acetyl groups from histone tails influencing chromatin structure and gene expression. HDAC8 has a molecular mass of roughly 41 kDa. It expresses in various tissues but shows higher expression in smooth muscle cells and certain cancer cell lines. Researchers also note its expression in the brain and liver corresponding to sections that require its deacetylase activity for various regulatory functions.
Biological function summary	HDAC8 plays a role in regulating transcription by being involved in altering chromatin structure. It does not form part of a large multi-protein complex unlike some other histone deacetylases. Its activity affects cell cycle progression and

	differentiation which is central to cellular physiology. HDAC8 also participates in non-histone protein deacetylation impacting various substrates allowing it to govern diverse cellular processes.
Pathways	Scientists associate HDAC8 with cell cycle regulation and muscle contraction. HDAC8 plays a role in the molecular pathways that control how myosin light chains undergo deacetylation interacting with proteins such as smooth muscle actin. During cell cycle regulation HDAC8 affects p53 a protein critical in controlling cell cycle progression and apoptosis integrating into pathways that decide cellular outcomes during division and response to stress.
Associated diseases and disorders	Researchers identify HDAC8 as having connections to certain cancers and Cornelia de Lange Syndrome (CdLS). Its deregulation links to tumorigenesis particularly in colorectal and neuroblastoma cancers where it may interact with oncogenes and tumor suppressors. In CdLS mutations that affect HDAC8 lead to developmental issues with the disorder being connected to the cohesin complex proteins which highlight HDAC8's importance in chromosomal cohesion and gene expression regulation.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

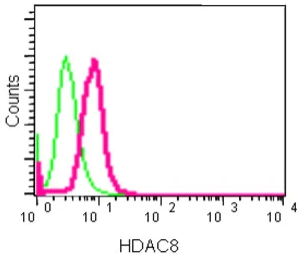
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

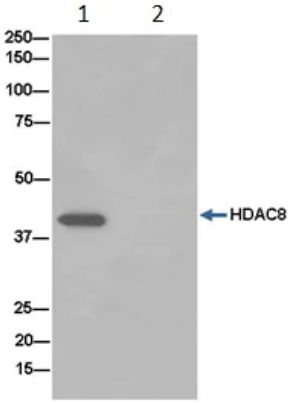
3 product images



Flow Cytometry (Intracellular) - Anti-HDAC8 antibody [EPR10338(2)] - BSA and Azide free (ab232643)

HDAC8 Flow Cytometry (Intracellular) staining using rabbit Anti-HDAC8 antibody

Intracellular Flow Cytometry analysis of K562 cells labeling HDAC8 using ab187139 at 1/150 dilution. A Goat anti rabbit IgG (FITC) at 1/150 dilution was used as secondary antibody. Cells were fixed with 2% paraformaldehyde. Isotype control: Rabbit monoclonal IgG.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab187139).

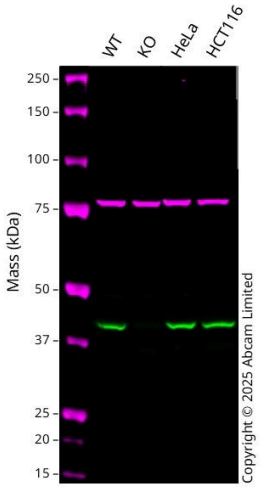


Immunoprecipitation - Anti-HDAC8 antibody [EPR10338(2)] - BSA and Azide free (ab232643)

Immunoprecipitation analysis of human fetal kidney tissue lysate labeling HDAC8 using ab187139 at 1/50 dilution (Lane 1). Anti-Rabbit IgG (HRP), specific to the non-reduced form of IgG at 1/1500 was used as secondary antibody. Lane 2: PBS instead of human fetal kidney tissue lysate.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab187139).

All lanes:
Immunoprecipitation - Anti-HDAC8 antibody [EPR10338(2)] (ab187139)

Predicted band size: 42 kDa



Western blot - Anti-HDAC8 antibody [EPR10338(2)] - BSA and Azide free (ab232643)

HDAC8 Western blot staining using rabbit Anti-HDAC8 antibody

This data was developed using ab187139, the same antibody clone in a different buffer formulation.
Western blot: Rabbit Monoclonal [EPR10338(2)] to HDAC8 ab187139 staining at 1/10000 dilution, shown in green; Mouse anti-CANX (ab238078) loading control staining at 1/20,000 dilution, shown in magenta.

A band was observed at 42 kDa in Wild-type U-87 MG cell lysates with no signal observed at this size in HDAC8 knockout U-87 MG cell line.

To generate this image, samples were run on an SDS-PAGE gel then transferred onto a nitrocellulose membrane. Membranes were blocked in 5pc Milk in TBS-0.1 % Tween® 20 (TBS-T) before incubation with primary antibodies overnight at 4 °C. Blots were washed four times in TBS-T, incubated with secondary antibodies for 1 h at room temperature, washed again four times then imaged.

Secondary antibodies used were Goat anti-Rabbit 800CW & Goat anti-Mouse 680RD at 1/20,000 dilution.

All lanes:
Western blot - Anti-HDAC8 antibody [EPR10338(2)] (ab187139) at 1/10000 dilution

Lane 1:
Wild-type U-87 MG at 20 µg

Lane 2:
HDAC8 knockout U-87 MG at 20 µg

Lane 3:
HeLa at 20 µg

Lane 4:
HCT 116 at 20 µg

Secondary

All lanes:
Goat anti-Rabbit 800CW & Goat anti-Mouse 680RD at 1/20000 dilution

Performed under reducing conditions.

Predicted band size: 42 kDa

Observed band size: 42 kDa

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.