Product Datasheet

HDAC1 Antibody - BSA Free
NB100-56340

Unit Size: 0.1 mg

Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.

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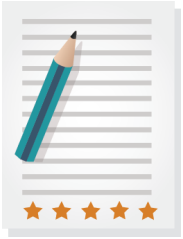
Reviews: 2 Publications: 19

Protocols, Publications, Related Products, Reviews, Research Tools and Images at:
www.novusbio.com/NB100-56340

Updated 9/9/2025 v.20.1



NB100-56340

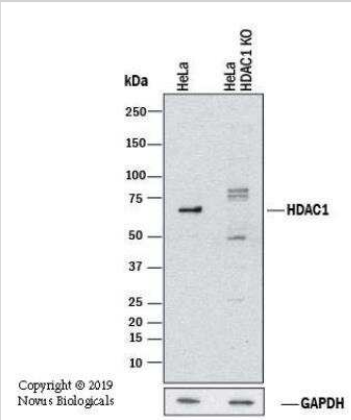
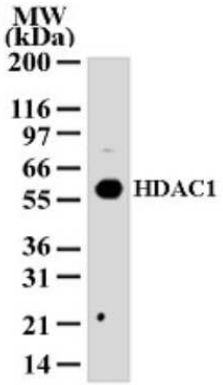
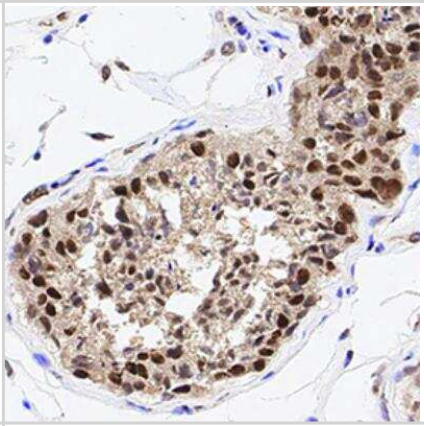
HDAC1 Antibody - BSA Free

Product Information	
Unit Size	0.1 mg
Concentration	1.0 mg/ml
Storage	Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
Clonality	Polyclonal
Preservative	0.02% Sodium Azide
Isotype	IgG
Purity	Protein G purified
Buffer	PBS

Product Description	
Description	Novus Biologicals Knockout (KO) Validated Rabbit HDAC1 Antibody - BSA Free (NB100-56340) is a polyclonal antibody validated for use in IHC, WB, ICC/IF and Simple Western. Anti-HDAC1 Antibody: Cited in 15 publications. All Novus Biologicals antibodies are covered by our 100% guarantee.
Host	Rabbit
Gene ID	3065
Gene Symbol	HDAC1
Species	Human, Mouse, Rat
Reactivity Notes	Mouse reactivity reported in scientific literature (PMID: 25648995). Rat reactivity reported in scientific literature (PMID: 26551542)
Immunogen	This antibody was generated by immunizing rabbits with a mixture of synthetic peptides corresponding to amino acids 1-5, 433-448 and 467-482 of human HDAC1 (Genbank Accession no. Q13547).

Product Application Details	
Applications	Western Blot, Simple Western, Immunohistochemistry-Paraffin, Immunohistochemistry, Immunohistochemistry-Frozen, Knockout Validated
Recommended Dilutions	Western Blot 2 ug/ml, Simple Western 1:200, Immunohistochemistry 1:500. Use reported in multiple pieces of scientific literature, Immunohistochemistry-Paraffin 1:10-1:500. Use reported in scientific literature (PMID 25648995), Immunohistochemistry-Frozen 1:10-1:500. Use reported in scientific literature (PMID 26551542), Knockout Validated
Application Notes	In 293, a 60 kDa band is observed. In Simple Western only 10 - 15 uL of the recommended dilution is used per data point. See Simple Western Antibody Database for Simple Western validation: Tested in Hek293 lysate 0.5 mg/mL, separated by Size, antibody dilution of 1:100, apparent MW was 68 kDa

Images

Western Blot: HDAC1 Antibody [NB100-56340] - Western blot shows lysates of HeLa human cervical epithelial carcinoma parental cell line and HDAC1 knockout (KO) HeLa cell line. PVDF membrane was probed with 2.0 ug/ml of Rabbit Anti-Human HDAC1 Polyclonal Antibody (Catalog # NB100-56340) followed by HRP-conjugated Anti-Rabbit IgG Secondary Antibody (Catalog #HAF008). Specific band was detected for HDAC1 at approximately 65 kDa (as indicated) in the parental HeLa cell line, but is not detectable in the knockout HeLa cell line. This experiment was conducted under reducing conditions.	
Western Blot: HDAC1 Antibody [NB100-56340] - Analysis of HDAC1 in HEK293 cell lysate with this antibody.	
Immunohistochemistry-Paraffin: HDAC1 Antibody [NB100-56340] - Human testis using HDAC1 antibody at 1:250 on a Bond Rx autostainer (Leica Biosystems). The assay involved 20 minutes of heat induced antigen retrieval (HIER) using 10mM sodium citrate buffer (pH 6.0) and endogenous peroxidase quenching with peroxide block. The sections were incubated with primary antibody for 30 minutes and Bond Polymer Refine Detection (Leica Biosystems) with DAB was used for signal development followed by counterstaining with hematoxylin. Whole slide scanning and capturing of representative images was performed using Aperio AT2 (Leica Biosystems). Staining was performed by Histowiz.	
Simple Western: HDAC1 Antibody [NB100-56340] - Simple Western lane view shows a specific band for HDAC1 in 0.5 mg/ml of HEK293 lysate. This experiment was performed under reducing conditions using the 12-230 kDa separation system.	

Publications

Laban H, Siegmund S, Zappe M et al. NFAT5/TonEBP Limits Pulmonary Vascular Resistance in the Hypoxic Lung by Controlling Mitochondrial Reactive Oxygen Species Generation in Arterial Smooth Muscle Cells Cells 2021-11-24 [PMID: 34943801]

Alvarez MEG, McGuire BC, Keating AF Obesity alters the ovarian proteomic response to zearalenone exposure Biology of reproduction 2021-04-14 [PMID: 33855340]

Laban H, Sigmund S, Schlereth K et al. NFAT5-dependent transcriptional stress control of endothelial cells prevents maladaptive remodeling of pulmonary arterioles in the hypoxic lung bioRxiv 2023-10-22 (Simple Western, Mouse)

Details:
Dilution 1:10

Opichka M Placental and Syncytiotrophoblast-Specific GAQ Signaling in the Pathogenesis of Preeclampsia Thesis 2023-01-01 (Simple Western)

Kappert L, Ruzicka P, Kutikhin A Et al. Loss of Nfat5 promotes lipid accumulation in vascular smooth muscle cells FASEB journal : official publication of the Federation of American Societies for Experimental Biology 2021-09-01 [PMID: 34383982] (WB, Mouse)

Lazarchuk P, Hernandez-Villanueva J, Pavlova Mn Et Al. Mutual balance of histone deacetylases HDAC1, HDAC2, and the acetyl reader ATAD2 regulates the level of acetylation of histone H4 on nascent chromatin of human cells Mol. Cell. Biol. 2020-02-03 [PMID: 32015101] (WB, KD, ICC/IF)

Johnson AM The Role of the Tumor Microenvironment on the Progression of Lung Cancer Thesis 2020-01-01 (WB, Mouse, Human)

Zhang, Q;Chao, TC;Patil, VS;Qin, Y;Tiwari, SK;Chiou, J;Dobin, A;Tsai, CM;Li, Z;Dang, J;Gupta, S;Urdahl, K;Nizet, V;Gingeras, TR;Gaulton, KJ;Rana, TM; The long noncoding RNA ROCKI regulates inflammatory gene expression EMBO J. 2019-04-15 [PMID: 30918008] (WB, Human)

Vlaming H, McLean C, Korthout T, Alemdehy MF. Evolutionarily-conserved chromatin crosstalk generates a DOT1L-dose dependency in thymic lymphoma caused by loss of HDAC1 bioRxiv 2019-01-10 (WB, Mouse)

Wijdeven RH, van Luijn MM, Wierenga-Wolf AF et al. Chemical and genetic control of IFNg-induced MHCII expression. EMBO Rep. 2018-07-18 [PMID: 30021835] (WB, Human)

Laumet G, Garriga J, Chen SR et al. G9a is essential for epigenetic silencing of K(+) channel genes in acute-to-chronic pain transition. Nat. Neurosci. 2015-12-01 [PMID: 26551542] (WB, IHC-Fr, Rat)

Matthias Patrick. Too much or too little, how much HDAC activity is good for you? Blood. 2013-03-14 [PMID: 23493769] (WB)

More publications at http://www.novusbio.com/NB100-56340

Procedures

Western Blot Protocol for HDAC1 Antibody (NB100-56340)
Western Blot Protocol

1. Perform SDS-PAGE on samples to be analyzed, loading 10-25 ug of total protein per lane.
2. Transfer proteins to PVDF membrane according to the instructions provided by the manufacturer of the membrane and transfer apparatus.
3. Stain the membrane with Ponceau S (or similar product) to assess transfer success, and mark molecular weight standards where appropriate.
4. Rinse the blot TBS -0.05% Tween 20 (TBST).
5. Block the membrane in 5% Non-fat milk in TBST (blocking buffer) for at least 1 hour.
6. Wash the membrane in TBST three times for 10 minutes each.
7. Dilute primary antibody in 2% Non-fat milk in TBST and incubate overnight at 4C with gentle rocking.
8. Wash the membrane in TBST three times for 10 minutes each.
9. Incubate the membrane in diluted HRP conjugated secondary antibody in blocking buffer (as per manufacturer's instructions) for 1 hour at room temperature.
10. Wash the blot in TBST three times for 10 minutes each (this step can be repeated as required to reduce background).
11. Apply the detection reagent of choice in accordance with the manufacturer's instructi

Immunohistochemistry-Paraffin Protocol for HDAC1 Antibody (NB100-56340)
Immunohistochemistry-Paraffin Embedded Sections

Antigen Unmasking:
Bring slides to a boil in 10 mM sodium citrate buffer (pH 6.0) then maintain at a sub-boiling temperature for 10 minutes. Cool slides on bench-top for 30 minutes (keep slides in the sodium citrate buffer at all times).

Staining:
1. Wash sections in deionized water three times for 5 minutes each.
2. Wash sections in PBS for 5 minutes.
3. Block each section with 100-400 ul blocking solution (1% BSA in PBS) for 1 hour at room temperature.
4. Remove blocking solution and add 100-400 ul diluted primary antibody. Incubate overnight at 4 C.
5. Remove antibody solution and wash sections in wash buffer three times for 5 minutes each.
6. Add 100-400 ul HRP polymer conjugated secondary antibody. Incubate 30 minutes at room temperature.
7. Wash sections three times in wash buffer for 5 minutes each.
8. Add 100-400 ul DAB substrate to each section and monitor staining closely.
9. As soon as the sections develop, immerse slides in deionized water.
10. Counterstain sections in hematoxylin.
11. Wash sections in deionized water two times for 5 minutes each.
12. Dehydrate sections.
13. Mount coverslips.

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Products Related to NB100-56340

NB800-PC6	293 Whole Cell Lysate
NBP2-33376H	Blue Marker Antibody (6F4-F6) [HRP]
HAF008	Goat anti-Rabbit IgG Secondary Antibody [HRP]
NB7160	Goat anti-Rabbit IgG (H+L) Secondary Antibody [HRP]
NBP2-24891	Rabbit IgG Isotype Control

Limitations

This product is for research use only and is not approved for use in humans or in clinical diagnosis. Primary Antibodies are guaranteed for 1 year from date of receipt.

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