Product Datasheet

Histone H3 Antibody - BSA Free
NB500-171

Unit Size: 0.1 ml
Aliquot and store at -20C or -80C. Avoid freeze-thaw cycles.

Reviews: 8  Publications: 26

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# NB500-171
**Histone H3 Antibody - BSA Free**

## Product Information

<table>
<thead>
<tr>
<th>Feature</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Unit Size</strong></td>
<td>0.1 ml</td>
</tr>
<tr>
<td><strong>Concentration</strong></td>
<td>1.0 mg/ml</td>
</tr>
<tr>
<td><strong>Storage</strong></td>
<td>Aliquot and store at -20°C or -80°C. Avoid freeze-thaw cycles.</td>
</tr>
<tr>
<td><strong>Clonality</strong></td>
<td>Polyclonal</td>
</tr>
<tr>
<td><strong>Preservative</strong></td>
<td>0.01% Sodium Azide</td>
</tr>
<tr>
<td><strong>Isotype</strong></td>
<td>IgG</td>
</tr>
<tr>
<td><strong>Purity</strong></td>
<td>Immunogen affinity purified</td>
</tr>
<tr>
<td><strong>Buffer</strong></td>
<td>PBS (pH 7.4)</td>
</tr>
<tr>
<td><strong>Target Molecular Weight</strong></td>
<td>15 kDa</td>
</tr>
</tbody>
</table>

## Product Description

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td><strong>Host</strong></td>
<td>Rabbit</td>
</tr>
<tr>
<td><strong>Gene ID</strong></td>
<td>126961</td>
</tr>
<tr>
<td><strong>Gene Symbol</strong></td>
<td>H3C14</td>
</tr>
<tr>
<td><strong>Species</strong></td>
<td>Human, Mouse, Rat, Insect, Xenopus, Yeast</td>
</tr>
<tr>
<td><strong>Reactivity Notes</strong></td>
<td>Predicted to react with many species based on 100% sequence homology including C. elegans, chicken, drosophila, and plant. Xenopus reactivity reported in scientific literature (PMID: 24048589). Insect (Aedes aegypti) reactivity reported from a verified customer review.</td>
</tr>
<tr>
<td><strong>Immunogen</strong></td>
<td>This Histone H3 antibody was raised against a synthetic peptide made to an C-terminal portion of the human Histone H3 protein (between residues 100-136) [UniProt P68431]</td>
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## Product Application Details

<table>
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<tr>
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<tbody>
<tr>
<td><strong>Applications</strong></td>
<td>Western Blot, Immunoblotting, Immunocytochemistry/Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Paraffin, Chromatin Immunoprecipitation (ChIP), Single Cell Western</td>
</tr>
<tr>
<td><strong>Recommended Dilutions</strong></td>
<td>Western Blot 1:1000-1:4000, Immunohistochemistry 1:100-1:300, Immunocytochemistry/Immunofluorescence reported in scientific literature (PMID 24048589), Immunohistochemistry-Paraffin 1:100-1:300, Immunoblotting reported in scientific literature (PMID 24048589), Chromatin Immunoprecipitation (ChIP), Single Cell Western</td>
</tr>
<tr>
<td><strong>Application Notes</strong></td>
<td>In Western Blot, a band is seen ~15 kDa. In IHC-P, nuclear staining was observed in human, mouse, and rat tissues. Prior to immunostaining paraffin tissues, antigen retrieval with sodium citrate buffer (pH 6.0) is recommended.</td>
</tr>
</tbody>
</table>

Chromatin Immunoprecipitation: Histone H3 Antibody [NB500-171] - Chromatin from one million formaldehyde cross-linked HeLa cells was precipitated using 2 μg of NB500-171 and 25 μL of magnetic IgG beads, using standard ChIP methods. A similar sample containing no antibody (No Ab) was included as a negative control. Immunoprecipitated DNA was quantified using quantitative real-time PCR and SYBR green dye, then normalized to the non-precipitated input chromatin. Representative target genes from active, inactive, and heterochromatic regions of the genome show amplification, indicative of the presence of Histone H3.


Western Blot: Histone H3 Antibody [NB500-171] - MDA-MB-231 cells were treated with vehicle (V) or paclitaxel (P). Cytosolic and nuclear lysates were prepared, and immunoblot assay was performed. WB image submitted by a verified customer review.

Western Blot: Histone H3 Antibody [NB500-171] - Reduced histone levels in senescent cells is induced in vitro by different means, and in vivo from aged donors. (b) Western immunoblot analyses of histones in fibroblasts described in (a). (c) Histone levels in dermal fibroblasts isolated from human neonatal (age 0, donors a and b) and adult donors. Anti- used at 1:20,000 and Anti-Histone H4 [ac Lys12, ac Lys16, ac Lys8, ac Lys5] (NBP2-16848) used at 1:10,000. Image collected and cropped by CiteAb from the following publication (https://doi.org/10.1038/s41598-020-59163-4) licensed under a CC-BY license.

Immunocytochemistry/Immunofluorescence: Histone H3 Antibody [NB500-171] - HeLa cells were fixed in 4% paraformaldehyde for 10 minutes and permeabilized in 0.5% Triton X-100 in PBS for 5 minutes. The cells were incubated with anti- NB500-171 at 1 ug/ml overnight at 4C and detected with an anti-rabbit Dylight 488 (Green) at a 1:1000 dilution for 60 minutes. Nuclei were counterstained with DAPI (Blue). Cells were imaged using a 100X objective and digitally deconvolved.

Immunocytochemistry/Immunofluorescence: Histone H3 Antibody [NB500-171] - PC12 cells were fixed in 4% paraformaldehyde for 10 minutes and permeabilized in 0.5% Triton X-100 in PBS for 5 minutes. The cells were incubated with anti- NB500-171 at 1 ug/ml overnight at 4C and detected with an anti-rabbit Dylight 488 (Green) at a 1:1000 dilution for 60 minutes. Nuclei were counterstained with DAPI (Blue). Cells were imaged using a 100X objective and digitally deconvolved.


Western Blot: Histone H3 Antibody [NB500-171] - (1) HeLa, (2) S. cerevisiae whole cell lysates, (3) Histones purified from HeLa cells. Theoretical molecular weight is ~15 kDa.

Western Blot: Histone H3 Antibody [NB500-171] - Total histone H3 levels in MCF-7 and HCT-116 cells. Observed molecular weight is ~17 kDa. WB image submitted by a verified customer review.
Immunocytochemistry/Immunofluorescence: Histone H3 Antibody [NB500-171] - HeLa cells were fixed for 10 minutes using 10% formalin and then permeabilized for 5 minutes using 1X PBS + 0.5% Triton X-100. The cells were incubated with anti-Histone H3 at 5 ug/mL overnight at 4C and detected with an anti-rabbit DyLight 488 (Green) at a 1:500 dilution. Nuclei were counterstained with DAPI (Blue). Cells were imaged using a 40X objective.

Immunocytochemistry/Immunofluorescence: Histone H3 Antibody [NB500-171] - NIH3T3 cells were fixed for 10 minutes using 10% formalin and then permeabilized for 5 minutes using 1X PBS + 0.5% Triton X-100. The cells were incubated with anti-Histone H3 at 5 ug/mL overnight at 4C and detected with an anti-rabbit DyLight 488 (Green) at a 1:500 dilution. Nuclei were counterstained with DAPI (Blue). Cells were imaged using a 40X objective.


Publications


Ait Saada A, Costa AB, Lobachev KS. Characterization of canavanine-resistance of cat1 and vhc1 deletions and a dominant any1 mutation in fission yeast PLOS ONE 2022-05-31 [PMID: 35639710] (WB)


Feng S, Ma S, Li K et al. RIF1-ASF1-mediated high-order chromatin structure safeguards genome integrity Nature Communications 2022-02-17 [PMID: 35177609]

Fan M, Yang K, Wang X et al. Lactate promotes endothelial-to-mesenchymal transition via Snail1 lactylation after myocardial infarction Science advances 2023-02-03 [PMID: 36735787] (WB, Mouse)

Yang Y, Chen C, Zuo Q Et al. NARF is a hypoxia-induced coactivator for OCT4-mediated breast cancer stem cell specification Sci Adv 2022-12-09 [PMID: 36490339] (Chemotaxis, Human)

Details:
Citation using the DyLight 405 version of this antibody.

Wang J, Liu R, Wang Y Et Al. Repression of the miR-627-5p by histone deacetylase 3 contributes to hypoxia-induced hepatocellular carcinoma progression J Cancer 2021-08-02 [PMID: 34335948]


Decker CJ, Burke JM, Mulvaney PK, Parker R RNA is required for the integrity of multiple nuclear and cytoplasmic membrane-less RNP granules The EMBO journal 2022-05-02 [PMID: 35355287] (WB)

Palombo R, Paronetto MP pncCCND1 B Engages an Inhibitory Protein Network to Downregulate CCND1 Expression upon DNA Damage Cancers 2022-03-17 [PMID: 35326688] (Chemotaxis, Human)

More publications at http://www.novusbio.com/NB500-171
Western Blot protocol for Histone H3 Antibody (NB500-171)

Western Blot Protocol

1. Perform SDS-PAGE on samples to be analyzed, loading 40 ug of total protein per lane.
2. Transfer proteins to membrane according to the instructions provided by the manufacturer of the membrane and transfer apparatus.
3. Stain according to standard Ponceau S procedure (or similar product) to assess transfer success, and mark molecular weight standards where appropriate.
4. Rinse the blot.
5. Block the membrane using standard blocking buffer for at least 1 hour.
6. Wash the membrane in wash buffer three times for 10 minutes each.
7. Dilute primary antibody in blocking buffer and incubate 1 hour at room temperature.
8. Wash the membrane in wash buffer three times for 10 minutes each.
9. Apply the diluted HRP conjugated secondary antibody in blocking buffer (as per manufacturers instructions) and incubate 1 hour at room temperature.
10. Wash the blot in wash buffer 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 manufacturers instructions.

Note: Tween-20 can be added to the blocking or antibody dilution buffer at a final concentration of 0.05-0.2%.

Immunohistochemistry-Paraffin protocol for Histone H3 Antibody (NB500-171)

Immunohistochemistry-Paraffin Embedded Sections Protocol

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.

Staining:
1. Wash sections in deionized water three times for 5 minutes each.
2. Wash sections in wash buffer for 5 minutes.
3. Block each section with 100-400 ul blocking solution 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 biotinylated diluted secondary antibody. Incubate 30 minutes at room temperature.
7. Remove secondary antibody solution and wash sections three times with wash buffer for 5 minutes each.
8. Add 100-400 ul Streptavidin-HRP reagent to each section and incubate for 30 minutes at room temperature.
9. Wash sections three times in wash buffer for 5 minutes each.
10. Add 100-400 ul DAB substrate to each section and monitor staining closely.
11. As soon as the sections develop, immerse slides in deionized water.
12. Counterstain sections in hematoxylin.
13. Wash sections in deionized water two times for 5 minutes each.
14. Dehydrate sections.
15. Mount coverslips.
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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