

Histone H3K14bz antibody (pAb)

Catalog Nos: 39303, 39333, 39304

RRID: AB_3216391

Application(s): DB, WB

Reactivity: Wide Range Predicted

Purification: Affinity Purified

Host: Rabbit

Isotype: IgG

Molecular Weight: 17 kDa

Background: Histone H3 is one of the core components of the nucleosome. The nucleosome is the smallest subunit of chromatin and consists of 147 base pairs of DNA wrapped around an octamer of core histone proteins (two each of Histone H2A, Histone H2B, Histone H3 and Histone H4). Histone H1 is a linker histone, present at the interface between the nucleosome core and DNA entry/exit points. Histone H1 is responsible for establishing higher-order chromatin structure. Chromatin is subject to a variety of chemical modifications, including post-translational modifications of the histone proteins and the methylation of cytosine residues in the DNA. Reported histone modifications include acetylation, methylation, phosphorylation, ubiquitylation, glycosylation, ADP-ribosylation, carbonylation and SUMOylation.

More recently, the identification of the lysine benzoylation (Kbz) has been shown to be associated with gene expression and to have physiological relevance that is distinct from other histone modifications. Benzoylation can be induced by sodium benzoate, which is a widely used chemical food preservative and FDA-approved drug, generating an interest in the impact of chemical preservatives on histone modification and the potential effect of metabolite-direct modifications on cellular metabolism.

Immunogen: This antibody was raised against a peptide including benzyol- lysine 14 of human histone H3.

Buffer: 70 mM Tris, 105 mM NaCl, 0.07 mM EDTA, 31 mM glycine, 0.035% sodium azide, 0.35 mg/mL BSA, and 30% glycerol.

Application Notes:

Applications Validated by Active Motif:

WB: 1:500 - 112,000 dilution

DB: 1:1000 dilution

Storage and Guarantee: Some products may be shipped at room temperature. This will not affect their stability or performance. Avoid repeated freeze/thaw cycles by aliquoting items into single-use fractions for storage at -20°C for up to 2 years. Keep all reagents on ice when not in storage. This product is guaranteed for 12 months from date of receipt.

This product is for research use only and is not for use in diagnostic procedures.



Histone H3K14bz antibody (pAb) tested by Western blot.

20 µg of HeLa nuclear extract was run on SDS-PAGE and probed with antibody at 1:500 dilution. Lane 1: untreated cells. Lane 2: cells treated with Sodium Benzoate.

Specificity Analysis of Histone H3K14bz antibody (pAb):

Dot blot analysis was used to confirm the specificity of the antibody (pAb) for benzoylated (bz) lysine14 of histone H3. Peptides corresponding to regions around major sites of histone H3 methylation were spotted onto nitrocellulose and probed with the antibody at a dilution of 1:1,000. The amount of peptide (picomoles) spotted is indicated next to each row. Columns spotted as follows: 1: H3K23 unmod. 2: H3K23bz. 3: H4K8 unmod. 4: H3K8bz. 5: H3K12 unmod. 6: H3K12bz. 7: H3K14 unmod. 8: H3K14bz. 9: H2AK9 unmod. 10: H2AK9bz.

