Histone H2AK9ac antibody (pAb)

Catalog Nos: 39109, 39110
RRID: AB_2793158
Isotype: Serum
Application(s): DB, IF, WB
Reactivity: Human, Wide Range Predicted

Volumes: 200 µl, 10 µl
Purification: None
Host: Rabbit
Molecular Weight: 14 kDa

Background: Histone H2A 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; it 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; they play a major role in regulating gene expression.

Lysine N-ε-acetylation is a dynamic, reversible and tightly regulated protein and histone modification that plays a major role in chromatin remodeling and in the regulation of gene expression in various cellular functions. Histone H2A and Histone H2B are acetylated in bulk chromatin by p300 and form acetylated Histone H2A/Histone H2B heterodimers. When DNA associates with intact core histone octamers that contain acetylated H2A/H2B dimers, the inhibition of transcriptional initiation significantly decreases, indicating that acetylation of their lysine residues may mediate transcription.

Immunogen: This Histone H2A acetyl Lys9 antibody was raised against a peptide including acetyl-lysine 9 of human histone H2A.

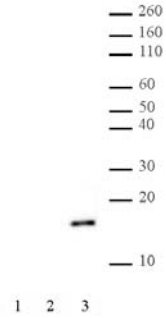
Buffer: Rabbit serum containing 30% glycerol and 0.035% sodium azide. Sodium azide is highly toxic.

Application Notes:
Applications Validated by Active Motif:
WB*: 1:2,000 - 1:5,000 dilution
IF: 1:500 dilution

*Note: many chromatin-bound proteins are not soluble in a low salt nuclear extract and fractionate to the pellet. Therefore, we recommend a High Salt / Sonication Protocol when preparing nuclear extracts for Western blot.

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.

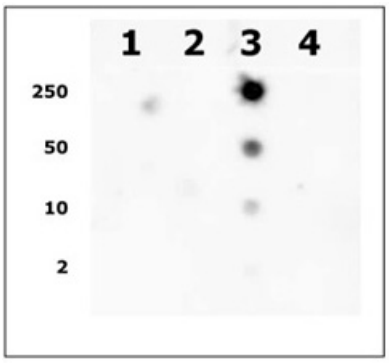
This product is for research use only and is not for use in diagnostic procedures.



Histone H2A acetyl Lys9 pAb tested by Western blot.

Western blot probed with Histone H2A acetyl Lys9 polyclonal antibody (1:5,000 dilution).

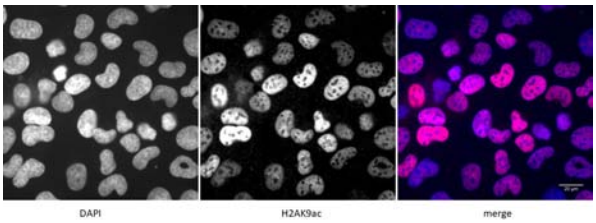
Lane 1: 20 ng recombinant histone H2A.
Lane 2: 5 µg acid extract of HeLa cells.
Lane 3: 5 µg acid extract of HeLa cells treated with sodium butyrate.



Specificity data:

Dot blot analysis was used to confirm the specificity of Histone H2A acetyl Lys9 pAb for acetyl Lys9 of Histone H2A. Modified and unmodified peptides were spotted onto PVDF and probed with the antibody at a 1:5,000 dilution. The amount of peptide spotted (in picomoles) is indicated next to each row.

Lane 1: Peptide acetylated at Lys5 of H2A.
Lane 2: Unmodified Lys5 peptide.
Lane 3: Peptide acetylated at Lys9 of H2A.
Lane 4: Unmodified Lys9 peptide.



Detection of H2AK9ac by immunofluorescence.

U2OS cells were stained with H2AK9ac antibody at a dilution of 1:500. Left panel: DAPI. Middle panel: H2AK9ac antibody staining. Right panel: merge.