

## Histone H3K9ac antibody (pAb)

**Catalog Nos:** 39585, 39586

**RRID:** AB\_2793268

**Isotype:** Serum

**Application(s):** DB, ICC, IF, WB

**Reactivity:** Human, Wide Range Predicted

**Volumes:** 100  $\mu$ l, 10  $\mu$ l

**Purification:** None

**Host:** Rabbit

**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). 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; these modifications play a major role in regulating gene expression.

Lysine N- $\epsilon$ -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 H3 Lys9 can also be mono-, di- or trimethylated. The methylation of this residue is often associated with transcriptional repression. However, acetylation of histone H3 Lys9 is associated with transcriptional activation of the genes.

**Immunogen:** This Histone H3 acetyl Lys9 antibody was raised against a peptide containing acetyl-lysine 9 of human histone H3.

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

### Application Notes:

Applications Validated by Active Motif:

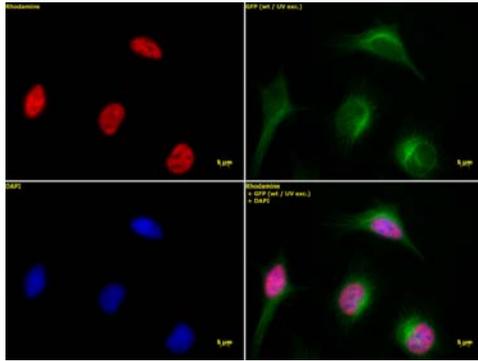
ICC/IF: 1:500 - 1:1,000 dilution

WB: 1:2,500 - 1:10,000 dilution

For Histone H3K9ac, we also offer AbFlex<sup>®</sup> Histone H3K9ac Recombinant Antibody (rAb). For details, see Catalog No. 91103.

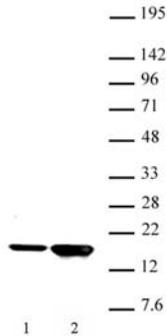
**Storage and Guarantee:** Some products may be shipped at room temperature. This will not affect their stability or performance. Avoid repeated freeze/thaw cycles by aliquoting items into single-use fractions for storage at -20°C for up to 2 years. Keep all reagents on ice when not in storage. This 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 H3 acetyl Lys9 pAb tested by immunofluorescence.**

Top left: HeLa cells stained with Histone H3 acetyl Lys9 pAb (1:1,000). Top right: Same cells stained with alpha Tubulin mAb (Clone 5-B-1-2). Bottom left: Stained with DAPI. Bottom right: Merge of all 3 images.



**Histone H3 acetyl Lys9 pAb tested by Western blot.**

HeLa nuclear extract (20 μg per lane) probed with Histone H3 acetyl Lys9 pAb (1:5,000).

Lane 1: No treatment.

Lane 2: Cells treated with sodium butyrate.

**Histone H3 acetyl Lys9 pAb tested by dot blot analysis.**

Dot blot analysis was used to confirm the specificity of Histone H3 acetyl Lys9 pAb for acetyl Lys9 histone H3. Acetylated peptides corresponding to the immunogen and related peptides were spotted onto PVDF and probed with the antibody at a dilution of 1:5,000. The amount of peptide (picomoles) spotted is indicated next to each row.

Lane 1: acetyl-Lys9 peptide.

Lane 2: unmodified Lys9 peptide.

Lane 3: acetyl-Lys14 peptide.

Lane 4: unmodified Lys14 peptide.

Lane 5: acetyl-Lys18 peptide.

Lane 6: acetyl-Lys23 peptide.

Lane 7: acetyl-Lys27 peptide.

