Histone H3 acetyl Lys64 antibody (pAb)

Catalog No: 39545, 39546

Isotype: Serum
Application(s): ChIP, DB, IF, WB
Reactivity: Budding Yeast, Human, Other (Wide Range)

Purification: None
Host: Rabbit
Volume: 200 µl, 10 µl
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-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 acetylation is often associated with transcriptional activation.

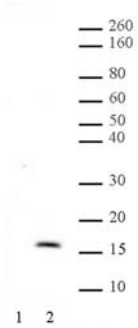
Immunogen: Peptide including acetyl-lysine 64 of histone H3.

Buffer: Rabbit serum containing 30% glycerol and 0.035% sodium azide.

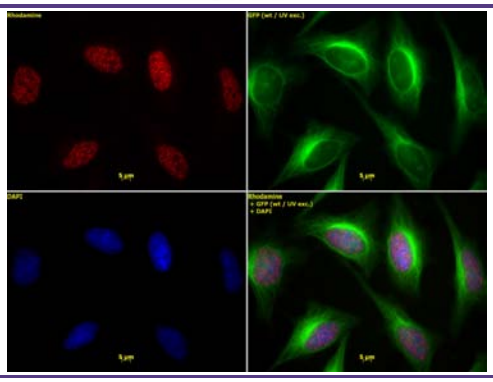
Application Notes: This Histone H3 acetyl Lys64 antibody (H3K64Ac) has been validated for use in Western blotting (1:1,000 - 1:2,500 dilution), chromatin IP (5 - 10 µl per ChIP) and immunofluorescence (1:250 - 1:1,000 dilution).

Storage and Guarantee: Antibodies in solution can be stored at -20°C for 2 years. Avoid repeated freeze/thaw cycles and keep on ice when not in storage. This product is guaranteed for 6 months from date of receipt.

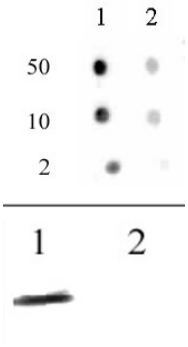
This product is for research use only and is not for use in diagnostic procedures.



Histone H3 acetyl Lys64 pAb tested by Western blot.
A549 whole-cell extract (15 µg per lane) probed with Histone H3 acetyl Lys64 pAb at a 1:1,000 dilution.
Lane 1: Untreated cells.
Lane 2: Cells treated with Trichostatin A.



Histone H3 acetyl Lys64 pAb tested by immunofluorescence.
Top left: HeLa cells stained with Histone H3 acetyl Lys64 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 Lys64 pAb tested by dot blot analysis.
Dot blot analysis was used to confirm the specificity of Histone H3 acetyl Lys64 pAb for acetyl lysine 64 of histone H3. The modified and unmodified peptides specific to the immunogen were spotted onto PVDF and probed with the antibody at a dilution of 1:10,000. The amount of peptide (picomoles) spotted is indicated next to each row.
Lane 1: acetyl lysine 64 peptide.
Lane 2: unmodified lysine 64 peptide.
Histone H3 acetyl Lys64 pAb tested by Western blot.
Western blot using acid extract of yeast *S. cerevisiae* (8 µg per lane) probed with Histone H3 acetyl Lys64 pAb at a dilution of 1:500.
Lane 1: Wild-type yeast.
Lane 2: Extract from yeast containing an arginine instead of a lysine at position 64.

Histone H3 acetyl Lys64 antibody tested by ChIP.
Chromatin IP performed using the ChIP-IT® Express Kit (Catalog No. 53008) and 50 µl of Ready-to-ChIP HeLa Chromatin (Catalog No. 53015) per ChIP. Subsequent to the ChIP reaction, DNA was purified from the immunoprecipitated chromatin and a region of the GAPDH gene was amplified by PCR.
Lane 1: ChIP using negative control rabbit IgG.
Lane 2: PCR input control.
Lane 3: ChIP using 10 µl of Histone H3 acetyl Lys64 antibody.