Histone H2BK12ac antibody (pAb)

Catalog Nos: 39669, 39670
RRID: AB_2793298
Isotype: Serum
Application(s): ChIP, DB, IF, WB
Reactivity: Human, Wide Range Predicted

Volumes: 100 µl, 10 µl
Purification: None
Host: Rabbit
Molecular Weight: 15 kDa

Background: Histone H2B 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.

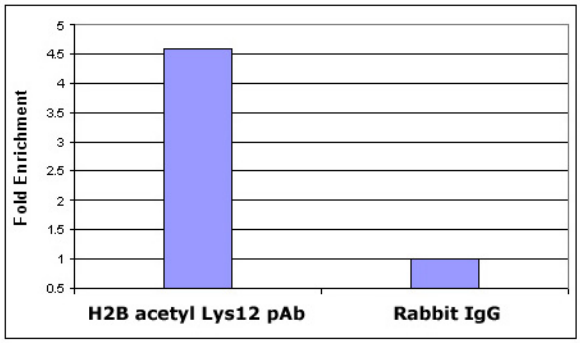
Immunogen: This Histone H2B acetyl Lys12 antibody was raised against a peptide containing acetyl Lys12 of Histone H2B.

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

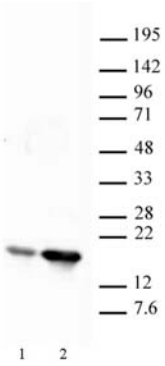
Application Notes:
Applications Validated by Active Motif:
ChIP: 10 µl per ChIP
WB: 1:5,000 - 1:25,000 dilution
IF: 1:500 dilution

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.

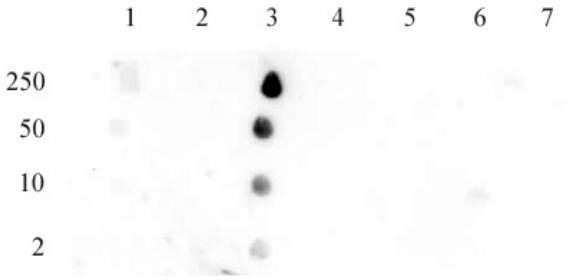
This product is for research use only and is not for use in diagnostic procedures.



Histone H2B acetyl Lys12 pAb tested by ChIP analysis.
Chromatin IP performed using the ChIP-IT® Express Kit (Catalog No. 53008) and HeLa Chromatin (1.5 x 10^6 cell equivalents per ChIP) using 10 µl of Histone H2B acetyl Lys12 pAb or the equivalent amount of rabbit IgG as a negative control. Real time, quantitative PCR (RT-qPCR) was performed on DNA purified from each of the ChIP reactions using a primer pair specific for the PABPC1 gene. Data are presented as Fold Enrichment of the ChIP antibody signal versus the negative control IgG using the ddCT method.

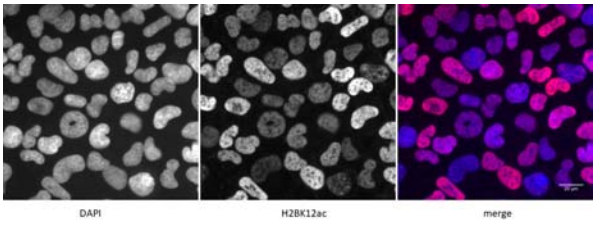


Histone H2B acetyl Lys12 pAb tested by Western blot.
A549 nuclear extract (10 µg per lane) probed with Histone H2B acetyl Lys12 pAb (1:5,000 dilution). Lane 1: untreated cells. Lane 2: cells treated with Trichostatin A.



Histone H2B acetyl Lys12 pAb tested by dot blot analysis.
Dot blot analysis was used to confirm the specificity of Histone H2B acetyl Lys12 pAb for acetyl-Lys12 of histone H2B. Modified and unmodified peptides were spotted onto PVDF and probed with Histone H2B acetyl Lys12 pAb at a dilution of 1:5,000. The amount of peptide (in picomoles) spotted is indicated next to each row.

Lane 1: unmodified lysine 12 peptide.
Lane 2: acetyl-lysine 5 peptide.
Lane 3: acetyl-lysine 12 peptide.
Lane 4: acetyl-lysine 16 peptide.
Lane 5: acetyl-lysine 46 peptide.
Lane 6: acetyl-lysine 120 peptide.



Detection of H2BK12ac by immunofluorescence.
U2OS cells were stained with H2BK12ac antibody at a dilution of 1:500. Left panel: DAPI. Middle panel: H2BK12ac antibody staining. Right panel: merge.