

Acetyl-Histone H2B (Lys20) mouse mAb (H2BK20ac mAb)



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Cat#: PTM-155

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Species: Mouse

0571-2883 3567

Size: 100 μ l at 0.5 mg/ml

Form: supplied in liquid form

| Application | Recommend dilution | Species Reactivity | Immunogen | Swissprot ID | Molecular Weight |
|----------------|--------------------|--------------------|------------------|--------------|------------------|
| WB, Dot, ELISA | 1:2000 for WB | H, M, R | H2BK20ac -KLH | P62807 | 14 KDa |

****Species reactivity is determined by WB. Kept at -20°C after reconstituted.**

***** Anti-mouse secondary antibodies must be used to detect this antibody.**

Source/Purification:

This product is produced by immunizing mice with a synthetic acetyl peptide corresponding to residues surrounding Lys20 of human histone H2B. Antibodies are purified by protein G-conjugated agarose followed by acetylated histone H2B (Lys20) peptide affinity chromatography.

Recommended Applications:

ELISA, Dot blot, Western blot. Recommended antibody dilution: WB: 1:2000

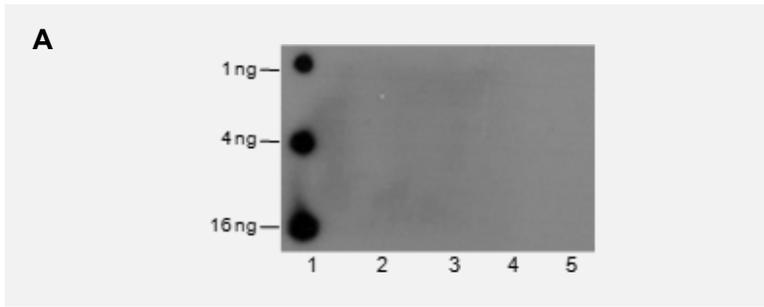
NOTE: For WB, incubate membrane with diluted antibody in 5% nonfat milk, 1 x TBS, 0.1% Tween-20 for two hours at room temperature with gentle shaking. Prepare working dilution immediately before use. Use at an assay dependent concentration. Optimal dilutions/concentrations should be determined by the end user. Not yet tested in other applications

Scientific Description:

The ϵ -amino lysine acetylation of proteins is an important reversible modification controlling protein activity. The amino-terminal tails of core histones undergo lysine acetylation in multiple sites, termed as "histone code". Lysine acetylation in core histones occurs in response to various stimuli. It plays vital roles in the regulation of many cellular processes including chromatin dynamics, transcriptional activities, cell cycle progression, apoptosis, differentiation, and nuclear import. In most species, histone H2A is primarily acetylated at Lys5, 9, 15, and 36; H2B is primarily acetylated at Lys5, 12, 15, 16, and 20. Histone H2B is primarily acetylated at Lys5, 9, 14, 18, 23, 27, 56, and 79. Histone H4 is primarily acetylated at Lys5, 8, 12, 16, and 20. More than 20 histone acetyltransferases (HATs) and 18 histone deacetylases (HDACs) have been identified to date, while the mechanistic details of substrate selection and site specificity of these

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enzymes remain unclear. The level of histone lysine acetylation has been found to be impaired in cancers and other diseases, therefore, enzymes regulating histone lysine acetylation have become promising targets for anti-cancer drugs.



| No. | Peptide | No. | Peptide |
|--------|----------|--------|----------|
| lane 1 | H2BK20ac | lane 2 | H2BK16ac |
| lane 3 | H2BK20bu | lane 4 | H2BK20cr |
| lane 5 | H2BK20un | | |

Figure A: Dot blotting analysis on indicated amount of peptides using histone H2BK20ac mouse mAb. The list of peptides is included in the above table.

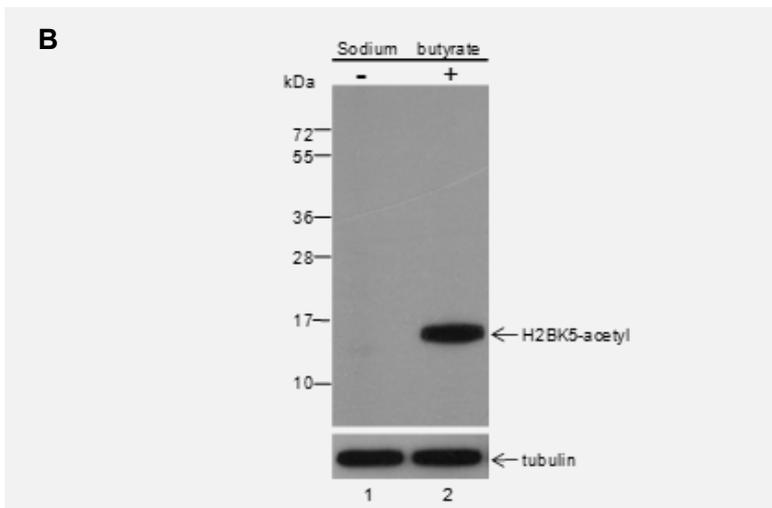
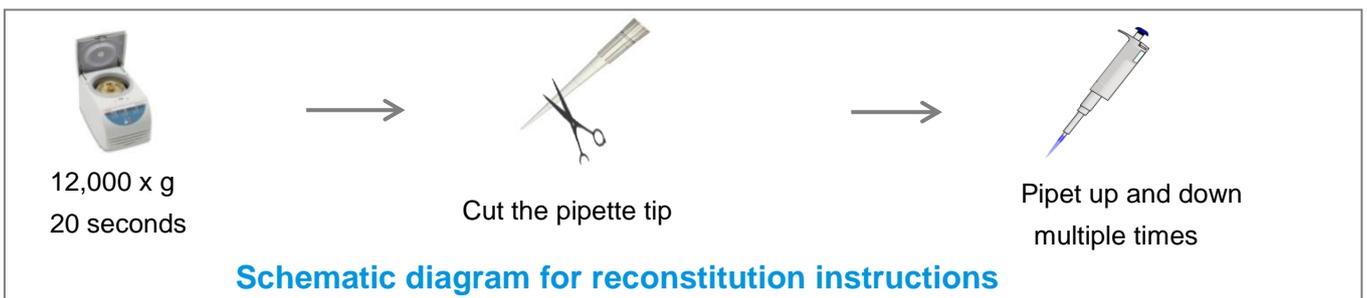


Figure B: Western blotting analysis on 30 ug of crude proteins from HeLa whole cell lysates with (lane 2) or without (lane 1) treatment of sodium butyrate (30 mM, 4 hours) using acetyl-histone H2B (Lys20) mouse mAb (1:2000).

Storage & Stability:

The antibody is kept in PBS with 50% glycerol and 0.01% sodium azide. Upon receipt, please centrifuge the antibody at 12,000 x g for 20 seconds and store the antibody at -20°C. Avoid repeated freeze/thaw cycles. Stable for 12 months from date of receipt. Leave the antibody at room temperature for 2 minutes and gently mixed using pipette before usage.



Application Key: WB-western

ChIP-chromatin immunoprecipitation

IP-immunoprecipitation

Modification Key: me-methyl ac-acetyl pr-propionyl bu-butyry cr-crotonyl hib-2ohibutyryl bhb-3ohbutyryl

Species Cross-Reactivity Key: H-human M-mouse R-rat Mk-monkey All-all species expected