

Histone H4K20me2 antibody (mAb)

Catalog No: 61533

RRID: AB_2650525

Clone: MABI 0422

Isotype: IgG1

Application(s): DB, WB

Reactivity: Human, Wide Range Predicted

Quantity: 100 µg

Purification: Protein G Chromatography

Host: Mouse

Concentration: 1.0 µg/µl

Molecular Weight: 8 kDa

Background: Histone H4 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.

Histone 4 lysine 20 (H4K20) can be mono-, di- or trimethylated by different histone methyltransferases such as NSD1 or ASH1. The methylation of this lysine is often associated with transcriptional repression.

Immunogen: This antibody was raised against a synthetic peptide containing dimethyl-lysine 20 of human Histone H4.

Buffer: Purified IgG in PBS with 30% glycerol and 0.035% sodium azide. Sodium azide is highly toxic.

Application Notes:

Applications Validated by Active Motif:

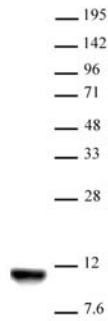
WB*: 0.5 - 2 µg/ml dilution

*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.

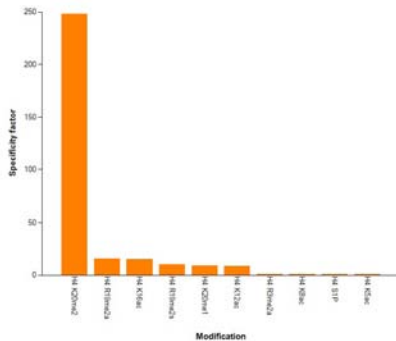
This product is for research use only and is not for use in diagnostic procedures.

This antibody is manufactured by MAB Institute, Inc.



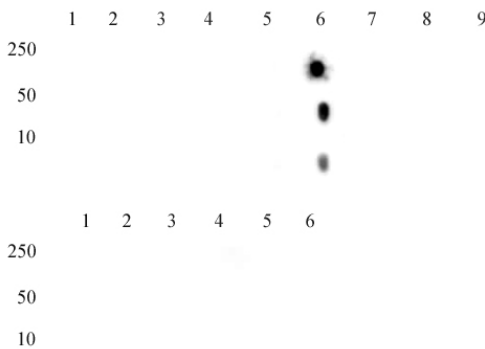
Histone H4K20me2 antibody (mAb) tested by Western blot.

Nuclear extract (20 µg) of HeLa cells probed with the Histone H4K20me2 antibody (mAb) at 2 µg/ml.



Histone H4K20me2 antibody (mAb) specificity tested by peptide array analysis.

Peptide array analysis was used to confirm the specificity of this antibody for its intended modification. Histone H4K20me2 antibody (mAb) was applied at a dilution of 0.5 µg/ml to Active Motif's MODified™ Histone Peptide Array (Catalog No. 13001). The arrays were scanned with ArrayAnalysis Software 7 and the results plotted. Specificity data is shown for the most reactive peptides and those related to the immunogen.



Histone H4K20me2 antibody (mAb) tested by dot blot analysis.

Dot blot analysis was used to confirm the specificity of Histone H4K20me2 antibody (mAb) for dimethyl-Lys20 of histone H4. Peptides corresponding to the immunogen and related peptides were spotted onto PVDF and probed with Histone H4K20me2 antibody (mAb) at 2 µg/ml. The amount of peptide (picomoles) spotted is indicated next to each row.

Top panel: Lane 1: unmodified Lys79 peptide Lane 2: monomethyl-Lys79 H4 peptide Lane 3: dimethyl-Lys79 H4 peptide Lane 4: trimethyl-Lys79 H4 peptide Lane 5: monomethyl-Lys20 H4 peptide Lane 6: dimethyl-Lys20 H4 peptide Lane 7: trimethyl-Lys20 H4 peptide Lane 8: acetyl-Lys20 peptide Lane 9: unmodified Lys20 peptide Bottom panel: Lane 1: monomethyl-Lys31 H4 peptide Lane 2: dimethyl-Lys31 H4 peptide Lane 3: trimethyl-Lys31 H4 peptide Lane 4: monomethyl-Lys44 H4 peptide Lane 5: dimethyl-Lys44 H4 peptide Lane 6: trimethyl-Lys44 H4 peptide.