Histone H4K20me3 antibody (mAb)

Catalog Nos: 39671, 39672
RRID: AB_2650526
Clone: 6F8-D9
Isotype: IgG
Application(s): ChIP, DB, ICC, WB
Reactivity: Human, Mouse, Wide Range Predicted

Quantities: 100 µg, 10 µg
Purification: Protein G Chromatography
Host: Mouse
Concentration: 1 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 Histone H4 trimethyl Lys20 antibody (mAb) was raised against a peptide containing trimethyl Lys20 of Histone H4.

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

Application Notes:
Applications Validated by Active Motif:
ChIP: 5 - 10 µg per ChIP
WB*: 1 - 2 µg/ml dilution
DB: 0.2 µg/ml dilution

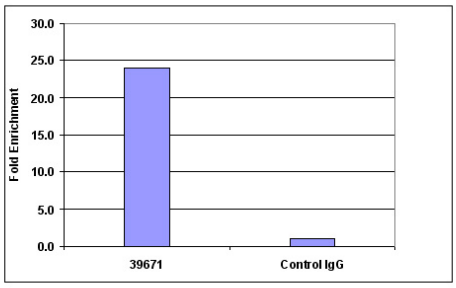
Slight reactivity towards histone H4 dimethyl Lys20 might be observed under certain conditions. Individual optimization may be required.

*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.

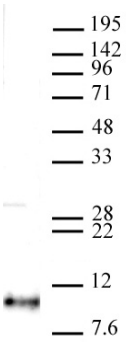
The addition of 0.05% Tween 20 in the blocking buffer and primary antibody incubation buffer can be used to aid in detection by Western blot. Individual optimization may be required.

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.

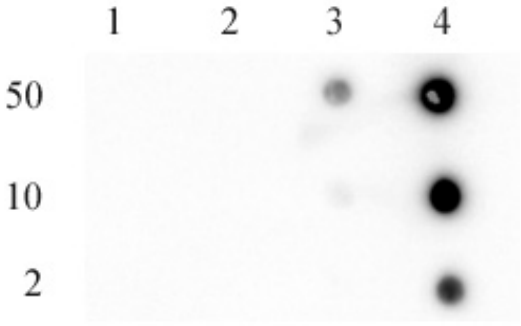
This product is for research use only and is not for use in diagnostic procedures.



Histone H4 trimethyl Lys20 mAb (Clone 6F8-D9) tested by ChIP.
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 5 µg of Histone H4 trimethyl Lys20 antibody (mAb) (Clone 6F8-D9) 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 human SAT-alpha repeats. Data are presented as Fold Enrichment of the ChIP antibody signal compared to the negative control IgG (which has been normalized to 1.0) using the ddCT method.



Histone H4K20me3 antibody (mAb) (Clone 6F8-D9) tested by Western blot.
HeLa nuclear extract (20 µg / lane) probed with Histone H4K20me3 antibody at 2 µg/ml.



Histone H4K20me3 antibody (mAb) tested by dot blot analysis.
Dot blot analysis was used to confirm the specificity of Histone H4K20me3 antibody (mAb) for trimethyl-Lys20 of histone H4. Peptides were spotted onto PVDF and probed with antibody at a dilution of 0.2 µg/ml. The amount of peptide (in picomoles) spotted is indicated (2, 10, and 50). Column 1: H4K20me0. Column 2: H4K20me1. Column 3: H4K20me2. Column 4: H4K20me3.