Histone H4R3me2a (asymmetric) antibody (pAb)

Catalog Nos: 39705, 39006, 39706
RRID: AB_2793313
Isotype: IgG
Application(s): ChIP, DB, IF, WB
Reactivity: Human, Wide Range Predicted

Volumes: 100 µl, 50 µl, 10 µl
Purification: Protein A Chromatography
Host: Rabbit
Molecular Weight: 8 kDa

Background: Histone H4 is one of the core components of the nucleosome, the basic building block of chromatin. Histones are 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. The methylation of histones can occur on two different residues: arginine or lysine.

Asymmetric dimethylation of histone H4 at arginine 3 (Arg3), catalyzed by the PRMT methyltransferases, is associated with transcriptional activation by nuclear hormone receptors. Arg3 methylation has been reported to facilitate the subsequent acetylation of histone H4 by the acetyltransferase p300. Histone H4 dimethyl Arg3 asymmetric methylation (H4R2me2a) is catalyzed by PRMT1 and PRMT6.

Immunogen: This Histone H4 dimethyl Arg3, asymmetric antibody was raised against a synthetic peptide containing dimethyl-Arg3 (asymmetric) of human histone H4.

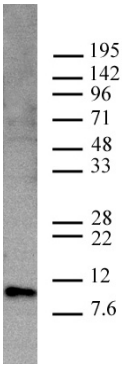
Buffer: Purified rabbit IgG in PBS with 30% glycerol and 0.035% sodium azide. Sodium azide is highly toxic.

Application Notes:
Applications Validated by Active Motif:
WB*: 1:500 - 1:2000 dilution
DB: 1:2,500 dilution

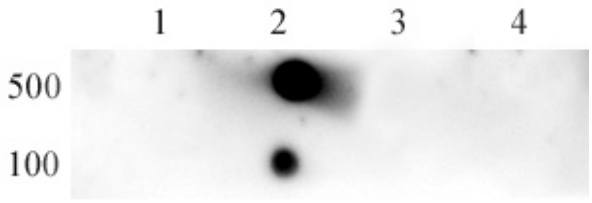
*Note: Many chromatin-bound proteins are not soluble in a low salt nuclear extract and fractionate to the pellet. Therefore, we recommend a High Salt / Sonication Protocol when preparing nuclear extracts for Western blot.

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.

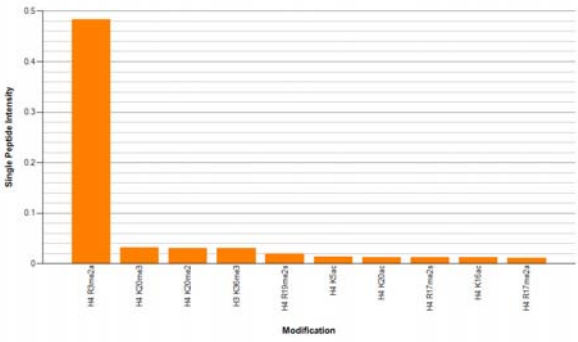


Histone H4R3me2a (asymmetric) antibody (pAb)tested by Western blot.
Nuclear extract of HeLa cells (20 µg) tested by Western blot using Histone H4R3me2a (asymmetric) antibody (pAb) at a dilution of 1:1000.



Histone H4R3me2a (asymmetric) antibody (pAb)tested by dot blot analysis.
Dot blot analysis was used to confirm the specificity of Histone H4 dimethyl Arg3 asymmetric antibody for dimethyl-arginine 3 of histone H4. Peptides corresponding to the immunogen and related peptides were spotted onto PVDF and probed with Histone H4 dimethyl Arg3 asymmetric antibody at 1:2500. The amount of peptide (picomoles) spotted is indicated next to each row.

Lane 1: H4R3me unmodified.
Lane 2: H4R3me2a peptide.
Lane 3: H4R3me2s peptide.
Lane 4: H4R3me1 peptide.



Histone H4R3me2a (asymmetric) antibody (pAb) specificity tested by peptide array analysis.
Peptide array analysis was used to confirm the specificity of this antibody for its intended modification. Histone H4R3me2a antibody was applied at a dilution of 1:20,000 to Active Motif's MODified™ Histone Peptide Array (Catalog No. 13001). The arrays were scanned with ArrayAnalysis Software 16 and the results plotted. Specificity data is shown for the most reactive peptides and those related to the immunogen.