

Histone H3K27me1 antibody (pAb)

Catalog Nos: 39377, 39378

RRID: AB_2793235

Isotype: Serum

Application(s): DB, ICC, IF, WB

Reactivity: Human, Wide Range Predicted

Volumes: 100 μ l, 10 μ l

Purification: None

Host: Rabbit

Molecular Weight: 17 kDa

Background: Histone H3 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 H3K27 can be mono-, di- or trimethylated by different histone methyltransferases, such as EZH2 or NSD3. While histone methylation can be associated with transcriptional activation or repression, methylation of Lysine 27 of histone H3 is mainly associated with transcriptional repression.

Immunogen: This Histone H3 monomethyl Lys27 antibody was raised against a peptide including monomethyl-lysine 27 of human histone H3.

Buffer: Rabbit serum containing 30% glycerol and 0.035% sodium azide. Sodium azide is highly toxic. For your convenience, an IgG version (Catalog No. 39889) of this antibody that was purified by Protein A Chromatography is also available.

Application Notes:

Applications Validated by Active Motif:

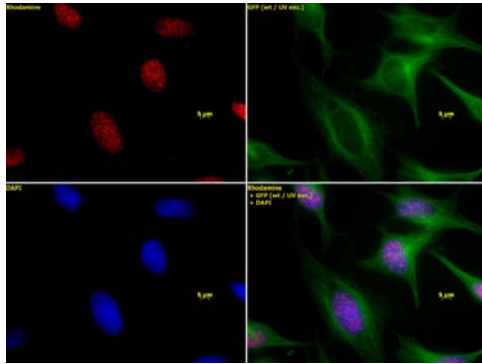
ICC/IF: 1:500 - 1:2,000 dilution

WB: 1:500 - 1:2,000 dilution

DB: 1:1,000 dilution

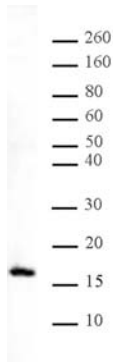
Storage and Guarantee: Some products may be shipped at room temperature. This will not affect their stability or performance. Avoid repeated freeze/thaw cycles by aliquoting items into single-use fractions for storage at -20°C for up to 2 years. Keep all reagents on ice when not in storage. This product 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 H3 monomethyl Lys27 antibody tested by immunofluorescence.

Top left: HeLa cells stained with Histone H3 monomethyl Lys27 antibody (1:1,000). Top right: Same cells stained with alpha Tubulin mAb (Clone 5-B-1-2). Bottom left: Same cells stained with DAPI. Bottom right: Merge of all 3 images.



Histone H3 monomethyl Lys27 antibody tested by Western blot.

HeLa acid extract (10 µg per lane) probed with Histone H3 monomethyl Lys27 antibody (1:2,000 dilution).

Histone H3 monomethyl Lys27 pAb tested by dot blot analysis.

Dot blot analysis was used to confirm the specificity of Histone H3 monomethyl Lys27 pAb for monomethyl Lys27 histone H3. Methylated peptides corresponding to the immunogen and related sequences derived from histone H3 were spotted onto PVDF and probed with the antibody at 1:1,000. The amount of peptide (picomoles) spotted is indicated next to each row. Lane 1: unmodified Lys4 peptide. Lane 2: monomethyl Lys4. Lane 3: dimethyl Lys4; Lane 4: trimethyl Lys4. Lane 5: monomethyl Lys9. Lane 6: unmodified Lys9. Lane 7: dimethyl Lys9. Lane 8: trimethyl Lys9. Lane 9: unmodified Lys27. Lane 10: monomethyl Lys27. Lane 11: dimethyl Lys27. Lane 12: trimethyl Lys27.

