

AbboMax, Inc

Innovation at Work

Rabbit anti Dimethyl-Histone H3 (Lys 27)

Alternate Names: Histone H3 dimethylated at Lys27(H3-K27me2); H3K27[Me2].

Order Information

Description: Rabbit anti-Dimethyl-Histone H3 (K27)
Catalogue#: 602-790
Lot#: See the label
Size: 100 ug/200 ul
Host: Rabbit
Clone: N/A
Application: ELISA, WB, ChIP, IHC
Reactivity: Hu, Rt, Ms, Ck, Bv

ANTIGEN PREPARATION

A synthetic peptide containing AR[Me2-K]ST in which Me2-K corresponds to Dimethyl lysine 27 of human histone H3.

BACKGROUND

Histones are basic nuclear proteins that together with DNA make up the nucleosome structure in eukaryotes. Nucleosomes consist of approximately 146 bp of DNA wrapped around a histone octamer composed of pairs of each of the four core histones (H2A, H2B, H3, and H4). The methylation of specific residues in the histone tails is a central modification for regulating epigenetic transitions in chromatin. Whereas methylation of histone H3 on lysine 4, 36, and 79 has been linked with gene activation, methylation of H3 on lysines 9, 27 and histone H4 on lysine 20 is associated with heterochromatin and some repressed genes with euchromatin. Modified lysine residues can exist in a mono-, di-, or tri-methylated state, while the arginine residues can be mono- or di-methylated. Histone H3 Lys4 trimethylation (H3-K4me3) is a conserved mark of actively transcribed chromatin. This antibody is specific for histone H3 tri-methylated at K4. The sequence is found in all mammals and a wide range of species, including *D. melanogaster*, *Arabidopsis*, Chicken and *Xenopus*. The antibody will react with any of the above species where the trimethylation modification is present.

PURIFICATION

The Rabbit IgG is purified by Epitope-specific Affinity Chromatography.

SPECIFICITY

This antibody only recognizes ~ 17 kDa of Dimethylated Histone H3 at K27. It does not cross react to non-methylated H3 or mono-, Tri-methylated Histone H3.

FORMULATION

This affinity purified antibody is supplied in sterile Phosphate-buffered saline (pH7.2) containing antibody stabilizer

STORAGE

The antibodies are stable for 12 months from date of receipt when stored at -20°C to -70°C. The antibodies can be stored at 2°C-8°C for three month without detectable loss of activity. Avoid repeated freezing-thawing cycles.

APPLICATIONS/SUGGESTED WORKING DILUTIONS

Western Blot	0.1-1 µg/ml
ELISA	0.01-0.1 µg/ml
Immunoprecipitation	2-5 µg/ml
IHC	1:100
Flow cytometry	Not tested

MOLECULAR WEIGHT:	17 kDa
POSITIVE CONTROL:	3T3 Nuclear Extract
CELLULAR LOCATION:	Nuclear

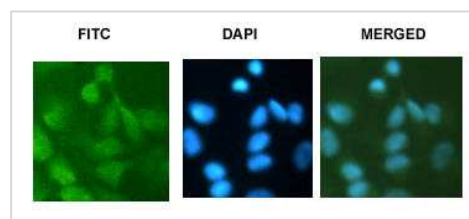
Optimal dilutions should be determined by researchers for the specific applications.

DATA ATTACHMENTS

66kDa
45kDa
30kDa
21kDa
15kDa



IP: The nuclear extract derived from 3T3 were immunoprecipitated by 4 µg of Rabbit anti-Dimethyl Histone 3 (K27) (Cat#602-790), then probed with Rb anti Dimethyl Histone 3 (K9), (Cat # 602-790) at 1:1000. An immunoreactive band at ~17kDa is observed.
Note: ~50 kDa and ~22 kDa are the rabbit immunoglobulin heavy and light chain



Fluorescent Immuno Histochemistry: 3T3 cells were cultured in chamber, and fixed onto slide followed by incubation with 5 ug/ml Rb Anti-Dimethyl Histone H3 (K29) antibody, (Cat# 602-790), then FITC labeled Gt anti Rb IgG for visualization under fluorescent microscope.

REFERENCES

Vakoc C et al. Histone H3 Lysine 9 Methylation and HP1 γ Are Associated with Transcription Elongation through Mammalian Chromatin. *Molecular Cell* (2003), Volume 19, Issue 3, Pages 381 – 391.

David J Seward et al. Demethylation of trimethylated histone H3 Lys4 *in vivo* by JARID1 JmjC proteins. *Nature Structural & Molecular Biology* 14, 240 - 242 (2007)

FOR RESEARCH USE ONLY.

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