CELL APPLICATIONS, INC.

Methyl Histone H3 (Arg17) Polyclonal Antibody

Cat. No. CC1039

Applications:	**WB, IP, IHC**
Detected MW:	**19 kDa**
Species & Reactivity:	**human, mouse, rat**
Isotype:	**Rabbit IgG**

BACKGROUND

Histone H3 is one of the four histones, along with H2A, H2B and H4, which form the eukaryotic nucleosome octamer core; the nucleosome octamer winds ~146 DNA base-pairs. It is a highly conserved protein of 135 amino acid residues. The N-terminal tail of histone H3 protrudes from the globular nucleosome core and can undergo several different types of epigenetic modifications that influence cellular processes. These modifications include the covalent attachment of methyl groups to arginine, methyl or acetyl groups to lysine, and phosphorylation of serine or threonine residues. Methylation of lysine 9 has been associated with gene silencing.[1] Acetylation of histone H3 occurs at several different lysine positions in the histone tail and is performed by a family of enzymes known as Histone Acetyl Transferases (HATs). Acetylation of lysine14 is commonly seen in genes that are being actively transcribed into RNA.[2] Phosphorylation of histone H3 at serine 10 occurs during mitosis and meiosis in a wide range of eukaryotes and has been shown to be required for proper chromosome transmission.[3] In addition, it was found that the coactivator CARM1 methylates histone H3 at Arg17 and Arg26 and cooperates synergistically with p160-type coactivators (e.g., GRIP1, SRC-1, ACTR) and coactivators with histone acetyltransferase activity (e.g., p300, CBP) to enhance gene activation by steroid and nuclear hormone receptors (NR).[4]

References:

1. Schneider, R et al: Nature Cell Biol. 6:73, 2004.
2. Liang, G. et al.: Proc. Natl. Acad. Sci. USA 101:7357, 2004.
3. Hsu, J. Y. et al.: Cell 102:279, 2000.
4. Ma, H. et al: Curr. Biol. 11: 1981-1985, 2001.

TECHNICAL INFORMATION

Source:
Methyl-Histone H3 (Arg17) Antibody is a rabbit polyclonal antibody raised against an epitope including Arg17 and surrounding human histone H3 sequence.

Specificity and Sensitivity:
This affinity purified antibody detects endogenous Methyl-human Histone H3 proteins.

Storage Buffer: PBS and 30% glycerol

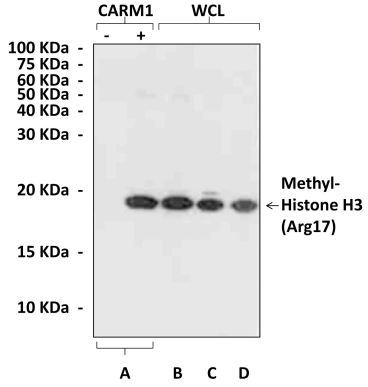
Storage:
Store at -20°C for at least one year. Store at 4°C for frequent use. Avoid repeated freeze-thaw cycles.

APPLICATIONS

Application:	*Dilution:
WB	1:1000
IP	n/d
IHC (Paraffin)	n/d
ICC	n/d
FACS	n/d

**Optimal dilutions must be determined by end user.*

QUALITY CONTROL DATA



Histone H3 proteins (A) treated or untreated with CARM1 methyltransferase, HeLa (B), NIH/3T3 (C), and C6 (D) lysates were subjected to Western Blot analysis using Methyl-Histone H3 (Arg17) Antibody.