Data Sheet (Cat.No.TMAC-01938)

TargetMol

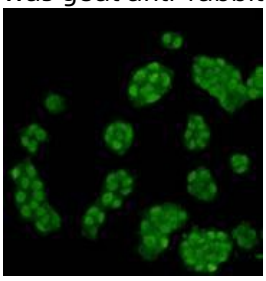
Anti-Mono-methyl-HIST1H3A (Lys4) Polyclonal Antibody

Product Details

Reactivity:	Human,Mouse,Rat
Conjugation:	Unconjugated
Molecular Weight:	Theoretical: 17 kDa.
Purification:	Immunogen affinity purified

Applications

Verified Activity: ICC image of Histone H3 (mono methyl K4) stained NCCIT cells. The secondary antibody (green) was goat anti-rabbit IgG (H+L) FITC conjugated.



Application:	FCM,ICC,IHC,WB
Recommended	WB: 1: 2000; ICC: 1:50

Properties

Stability & Storage:	Store at -20°C or -80°C for 12 months. Avoid repeated freeze-thaw cycles.
Shipping:	Shipping with blue ice.

Antigen Details

Immunogen:	Peptide
Uniprot ID:	P68431
Synonyms:	Histone H3K4-monomethylated;MonoMe-H3K4;H3K4me;Mono-Me-HIST1H3A (K4);Mono-methyl-HIST1H3A (K4);Mono-Me-HIST1H3A (Lys4)

Research Background

The nucleosome, made up of DNA wound around eight core histone proteins (two each of H2A, H2B, H3, and H4), is the primary building block of chromatin. Histones thereby play a central role in transcription regulation, DNA repair, DNA replication and chromosomal stability. DNA accessibility is regulated via a complex set of post-translational modifications of histones, also called histone code, and nucleosome remodeling. Methylation at Lys-5 (H3K4me), Lys-37 (H3K36me) and Lys-80 (H3K79me) are linked to gene activation. Methylation at Lys-5 (H3K4me) facilitates subsequent acetylation of H3 and H4. Methylation at Lys-80 (H3K79me) is associated with DNA double-strand break (DSB) responses and is a specific target for TP53BP1. Methylation at Lys-10 (H3K9me) and Lys-28 (H3K27me) are linked to gene repression. Methylation at Lys-10 (H3K9me) is a specific target for HP1 proteins (CBX1, CBX3 and CBX5) and prevents subsequent phosphorylation at Ser-11 (H3S10ph) and acetylation of H3 and H4. Methylation at Lys-5 (H3K4me) and Lys-80 (H3K79me) require preliminary monoubiquitination of H2B at 'Lys-120'. Methylation at Lys-10 (H3K9me) and Lys-28 (H3K27me) are enriched in inactive X chromosome chromatin.

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