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Anti-Histone H3 Mouse mAb [06G68]

Catalog No.: A33059

Basic Information

Catalog No. (Cat.No.)	A33059
Host species	Mouse
Reactivity	Human,Mouse,Rat
Applications	WB,IHC,ICC/IF,IF-P,ELISA
Synonyms	Histone H3,H3/A,H3C2,H3C3,H3C4,H3C6,H3C7,H3C8,H3FA,H3C10,H3C11,H3C12,HIST1H3A

Product Information

Target	Histone H3
Molecular Weight(Calculated)	NA
Molecular Weight(Observed)	15-17 kDa
Isotype	IgG
Conjugation	NA
Concentration	1 mg/ml
Clonality	Monoclonal
Clone No.	06G68
RRID	NA
Storage buffer	0.05% preservative in PBS (pH 7.2-7.4)
Storage	Stored at -20°C for 1 year. Avoid repeated freeze / thaw cycles.
Shipped at conditions	Frozen
Form	Liquid

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Product Usage Information

Application	Dilution
WB	1:1000
IHC	1:1000
ICC/IF	1:100-1:400
IF-P	1:200-1:2000
ELISA	1:5000-1:20000

Target Information

Protein Name	Histone H3
Gene Name	*H3C*
Domain	Full length
Background	Histones are basic core proteins of eukaryotic nucleosomes. Two copies each of H2A, H2B, H3 and H4 assemble into a histone octamer wrapped by DNA to form nucleosomes, the fundamental repeating unit of chromatin. The N-terminal tails of histones undergo diverse post-translational modifications, including ubiquitylation, phosphorylation, acetylation and mono/di/trimethylation. These epigenetic marks do not alter DNA sequence, but modulate chromatin compaction, governing DNA damage repair, gene transcription, cell cycle and other biological events.Ubiquitylation of H2A at Lys119 mediates transcriptional repression and DNA damage response. Phosphorylation of H2A.X at Ser139 (γH2AX) serves as a canonical marker for DNA double-strand breaks. H2A acetylation relaxes chromatin and facilitates transcription. H3 carries the most abundant modifications: phosphorylation at Thr3 and Ser10/Thr11 drives mitotic chromosome condensation. Acetylation at H3K9/K14/K18/K27/K36 generally activates transcription. H3K4 methylation (me1/me2/me3) marks active promoters, whereas H3K9 and H3K27 methylation are linked to heterochromatin formation and gene silencing. H3K36me2/me3 regulates transcriptional elongation, and H3K79 methylation controls DNA damage checkpoints. H4K16 acetylation counteracts chromatin compaction.