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#2991

## SUV39H1 Histone Methyltransferase Antibody

For Research Use Only. Not for Use in Diagnostic Procedures.

<b>Applications:</b> W	<b>Reactivity:</b> H M	<b>Sensitivity:</b> Transfected Only	<b>MW (kDa):</b> 48	<b>Source/Isotype:</b> Rabbit	<b>UniProt ID:</b> #O43463	<b>Entrez-Gene Id:</b> 6839
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### Product Usage Information

#### Application

Western Blotting

#### Dilution

1:1000

### Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at -20°C. Do not aliquot the antibody.

### Specificity/Sensitivity

SUV39H1 Histone Methyltransferase Antibody detects transfected levels of total SUV39H1 histone methyltransferase. The antibody does not cross-react with other related proteins.

### Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to the amino-terminal sequence of human SUV39H1. Antibodies are purified by protein A and peptide affinity chromatography.

### Background

Human histone methyltransferase SUV39H1 is the homolog of the dominant *Drosophila* PEV modifier Su(var)3-9 and is composed of 412 amino acid residues (1). It combines two of the most evolutionarily conserved domains of the "chromatin regulators": the chromo and SET domains (2,3). The 60 amino acid chromo domain represents an ancient histone-like fold that directs heterochromatic localizations. It has been demonstrated that the 130 amino acid SET domain contains the methyltransferase catalytic motif, which cooperates with the adjacent cysteine-rich regions to confer histone methyltransferase activity (1). This enzyme selectively methylates histone H3 on Lys9, which generates a binding site for HP1 proteins, a family of heterochromatic adaptor molecules involved in both gene silencing and supra-nucleosomal chromatin structure (4,5). SUV39H1 histone methyltransferase plays an important role in modification of histone amino termini and regulation of gene expression.

### Background References

1. Rea, S. et al. (2000) *Nature* 406, 593-599.
2. Koonin, E. V. et al. (1995) *Nucleic Acids Res.* 23, 4229-4232.
3. Jenuwein, T. et al. (1998) *Cell. Mol. Life Sci.* 54, 80-93.
4. Lachner, M. et al. (2001) *Nature* 410, 116-120.
5. Bannister, A. J. et al. (2001) *Nature* 410, 120-123.

### Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

### Western Blot Buffer

**IMPORTANT:** For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

### Applications Key

**W:** Western Blotting

### Cross-Reactivity Key

**H:** Human **M:** Mouse

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