Recombinant SET7 Monoclonal Antibody

catalog number: **AN302013L**

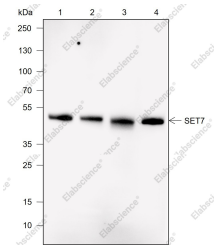
Note: *Centrifuge before opening to ensure complete recovery of vial contents.*

Description

Reactivity	Human;Mouse;Rat
Immunogen	Peptide. This information is proprietary to PTMab
Host	Rabbit
Isotype	Rabbit IgG
Clone	C131634
Purification	Protein A affinity purification
Conjugation	Unconjugated
Buffer	PBS, 50% glycerol, 0.05% Proclin 300, 0.05% protein protectant.

Applications	Recommended Dilution
WB	1:1000

Data



Western Blot with SET7 Monoclonal Antibody at dilution of 1:1000. Lane 1: HeLa, Lane 2: Jurkat, Lane 3: NIH/3T3, Lane 4: PC-12

Observed-MW:47 kDa

Calculated-MW:41 kDa

Preparation & Storage

Storage	Store at -20°C Valid for 12 months. Avoid freeze/thaw cycles.
Shipping	Ice bag

Background

Toll-free: 1-888-852-8623
Tel: 1-832-243-6086
Fax: 1-832-243-6017
Web: www.elabscience.com
Email: techsupport@elabscience.com

SET7/SET9 is a member of the SET domain-containing family, and can specifically methylate Lys4 on histone H3. Like most other lysine directed histone methyltransferases, it contains a conserved catalytic SET domain originally identified in the Drosophila Su (var)3-9, Enhancer of zeste and Trithorax proteins. Histone methylation is a major determinant for the formation of active and inactive regions of the genome and is crucial for the proper programming of the genome during development. Methylation of histone H3 Lys4 enhances transcriptional activation by coordinating the recruitment of BPTF, a component of the NURF chromatin remodeling complex, and WDR5, a component of multiple histone methyltransferase complexes. In addition, methylation of lysine 4 blocks transcriptional repression by inhibiting the binding of the NURD histone deacetylation complex to the amino-terminal tail of histone H3 and interfering with SUV39H1 mediated methylation of histone H3 Lys9. SET7/SET9 is highly active on free histone H3, but only very weakly methylates H3 within nucleosomes. Besides histones, SET7/SET9 also methylates Lys189 of the TAF10, a member of the TFIID transcription factor complex, and Lys372 of the p53 tumor suppressor protein. Methylation of TAF10 stimulates transcription in a promoter-specific manner by increasing the affinity of TAF10 for RNA polymerase II, which may potentiate pre-initiation complex formation. Methylation of p53 at Lys372 increases protein stability and leads to upregulation of target genes such as p21. Thus the loss of SET7/SET9 may represent another mechanism for the inactivation of p53 in human cancers.

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