

Diagenode sa

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Product name:
antibody directed against Set9
(Histone H3 lysine-4 methyltransferase)
Other names: SET7/9, H3-K4-HMTase

Catalog #: pAb-047-050	Type: Polyclonal	Size: 50 µg/ 25 µl
Lot #: 001	Source: Rabbit	Concentration: 2.0 µg/µl

Description: This antibody has been raised against the human recombinant Set9.

Set9 is a histone methyltransferase. Set9 methylates lysine 4 of histone H3 and is a specific tag for epigenetic transcriptional activation. Set9 also methylates lysine 372 of the tumor suppressor p53 (see overview below).

Specificity: Human: positive
Other species: not tested

Applications	Suggested dilution	References
ELISA	Not tested	
Dot blotting	Not tested	
Western blotting	1:1000	Fig1; [1]
Gel Supershift	Not tested	
Immunochemistry	Not tested	
Flow cytometry	Not tested	
Immunoprecipitation	Not tested	
ChIP	Not tested	

Format: In solution in PBS including 0.05% azide and 0.05% ProClin 300. The polyclonal antibody has been protein G purified.

Storage: For long storage, store at -20°C/ -80°C. Avoid multiple freeze-thaw cycles.

Precautions: This product is for research use only. Not for use in diagnostic or therapeutic procedures.

References:

[1] Huang J., Perez-Burgos L., Placek B.J., Sengupta R., Richter M., Dorsey J.A., Kubicek S., Opravil S., Jenuwein T. and Berger S.L. 2006. *Nature* 444(7119):629-32.

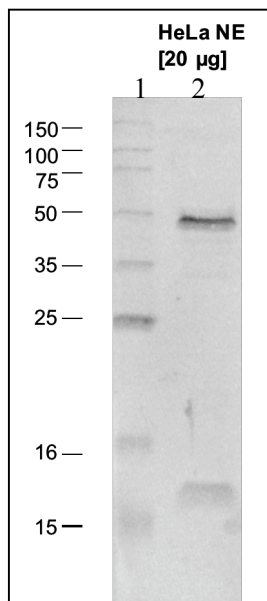
[2] Nishioka K., Chuikov S., Sarma K., Erdjument-Bromage H., Allis C.D., Tempst P. and Reinberg D. 2002. *Genes Dev.* 16(4):479-89.

[3] Chuikov S., Kurash J. K., Wilson J. R., Xiao B., Justin N., Ivanov G. S., McKinney K., Tempst P., Prives C., Gamblin S. J., Barlev N. A. and Reinberg D.. 2004. *Nature* 432:353-60.

Availability date: April 3, 2007. Last data sheet update: June 15, 2007

Lot #: 001/ purification day: April 2, 2007

Figure 1:



Western blot analysis using the Diagenode antibody anti-Set9

HeLa nuclear extract (HeLa NE) was analysed by Western blot using the Diagenode antibody directed against hEZH2 (cat# pAb-047-050) at a dilution of 1:1000 (Lane 2) in TBS-Tween + 5% skimmed milk. In lane 1 a molecular weight marker is shown.

Overview

Set9 contains a SET domain, but lacks the pre- and post-SET domains. Set9 methylates specifically lysine 4 (K4) of histone H3 (H3-K4) and potentiates transcription activation. The histone H3 tail interacts specifically with the histone deacetylase NuRD complex. Methylation of histone H3-K4 by Set9 precludes the association of NuRD with the H3 tail. Moreover, methylation of H3-K4 impairs Suv39h1-mediated methylation at K9 of H3 (H3-K9) [2].

Set9 also methylates p53 at lysine 372, a residue within the carboxyl-terminus regulatory region. Methylated p53 is restricted to the nucleus and the modification positively affects its stability. Set9 regulates the expression of p53 target genes in a manner dependent on the p53-methylation site [3]. Set9 mediated methylation of p53 at lysine 372 inhibits Smyd2-mediated methylation of lysine 370 by Smyd2 by blocking the interaction between p53 and Smyd2, providing regulatory cross-talk between post-translational modifications [1].