

Pr-Set7 monoclonal antibody

Catalog: MB67221

Host: Mouse

Reactivity: Human, Mouse

BackGround:

SET domain-containing lysine methyltransferase 8 (SET8), also known as PR/SET domain-containing protein 7 (PR/SET7), is a member of a family of histone lysine methyltransferases, each of which contains a conserved catalytic SET domain originally identified in *Drosophila* Su[*var*]3-9, Enhancer of zeste, and Trithorax proteins. SET8 is a single-subunit enzyme that mono-methylates histone H4 on Lys20, preferably on nucleosomal substrates. SET8 protein levels and Histone H4 Lys20 methylation are cell cycle regulated, both increasing in S phase and peaking at G2/M phase. SET8 interacts with the PCNA protein, associates with sites of active DNA synthesis, and is required for DNA replication and genome stability during S phase. Inhibition of SET8 using shRNA or siRNA results in arrest of replication forks, induction of double-stranded DNA breaks, and a Chk1-mediated cell-cycle arrest in S and G2/M phases of the cell cycle. Furthermore, SET8 methylates p53 on Lys382, down regulating the pro-apoptotic and checkpoint activation functions of p53. In response to DNA damage, SET8 expression levels decrease, allowing p53 to activate checkpoints and/or apoptosis. Both the methylation of histone H4 Lys20 and p53 appear to be important for the functions of SET8 in S phase.

Product:

Mouse IgG1. Liquid in PBS, pH 7.3, 30% glycerol, and 0.01% sodium azide.

Molecular Weight:

~ 55 kDa

Swiss-Prot:

Q9NQR1

Purification&Purity:

This antibody is purified through a protein G column.

Applications:

WB (1/500 - 1/1000)

Storage&Stability:

Store at 4 °C short term. Aliquot and store at -20 °C long term. Avoid freeze-thaw cycles.

Specificity:

Recognizes endogenous levels of Pr-Set7 protein.

DATA:



Western blot analysis of Pr-Set7 expression in mouse kidney (A) whole cell lysates.

Note:

For research use only, not for use in diagnostic procedure.

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