SET7 Methyltransferase

1-800-632-7799
info@neb.com
www.neb.com

M0233S 004161017101

M0233S

RR SAM 37° 65°

100 units	**2,000 U/ml**	**Lot: 0041610**
RECOMBINANT	**Store at –20°C**	**Exp: 10/17**

Description: SET7 Methyltransferase methylates lysine 4 (Lys 4) of histone H3 (1). Methylation occurs at the ε amino group of lysine residues (2,3). Di- and tri- methylation of histone H3 Lys 4 is a hallmark of transcriptionally active chromatin and is globally distributed (4,5).

Source: SET7 enzyme is expressed from human *SET7* cDNA using an *E. coli* expression system using an MBP fusion tag.

Supplied in: 50 mM Tris-HCl (pH 8.0 @ 25°C), 5 mM $MgCl_2$, 100 mM NaCl, 4 mM dithiothreitol and 50% glycerol.

Reagents Supplied with Enzyme:
10X HMT Reaction Buffer
32 mM S-adenosylmethionine (SAM)

Reaction Conditions: 1X HMT Reaction Buffer supplemented with 160 µM S-adenosylmethionine. Incubate at 37°C.

1X HMT Reaction Buffer:
50 mM Tris-HCl
5 mM $MgCl_2$
4 mM dithiothreitol
(pH 9.0 @25°C)

Unit Definition: One unit is defined as the amount of enzyme required to catalyze the transfer of 50 pmol of methyl group to substrate histone H3 in a total reaction volume of 25 µl in 10 minutes at 37°C.

Quality Assurance: Purified free of contaminating proteases.

Storage Note: S-adenosylmethionine (SAM) is stored at –20°C as a 32 mM stolution dissolved in 0.005 M sulfuric acid and 10% ethanol (pH 7.5). Under these conditions, SAM is stable for up to 6 months. SAM is unstable at 37°C and should be replenished in reactions incubated longer than 4 hours. Methylation can be optimized by using fresh SAM.

Heat Inactivation: 65°C for 20 minutes.

References:

1. Wang, H. et al. (2001) *Mol Cell,* 6, 1207–1217.
2. Xiao, B. et al. (2003) *Nature,* 421, 652–656.
3. Wilson, J.R. et al. (2002) *Cell,* 111, 105–115.
4. Schneider, R. et al. (2004) *Nat. Cell Biol.* 6, 73–77.
5. Santos-Rosa, H. et al. (2002) *Nature*, 419, 407–411.

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