SET8 Methyltransferase

1-800-632-7799
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M0428S 003161017101

M0428S

RR SAM 37° 65°

100 units	**2,000 U/ml**	**Lot: 0031610**
RECOMBINANT	**Store at –20°C**	**Exp: 10/17**

Description: SET8 (PR-Set7) Methyltransferase mono-methylates lysine 20 of histone H4 (H4-K20) at the ε amino group of lysine residues (1). SET8-mediated histone H4 methylation is implicated in genome replication and stability; and plays an important role in the nodal pathways of embryo development (2,3).

Source: SET8 enzyme is expressed as an MBP fusion with human SET8 cDNA using an *E. coli* expression system.

Supplied in: 10 mM Tris-HCl (pH 7.4 @ 25°C), 50 mM KCl, 5 mM dithiothreitol, 0.1 mM EDTA, 200 µg/ml BSA 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 5 pmol of methyl group to substrate histone H4 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 solution dissolved in 5 mM 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. Fang, J. et al. (2002) *Curr. Biol.*, 12, 1086–10992.
2. Tardt, M. et al. (2007) *J. Cell Biol.*, 179, 1337–1345.
3. Beck, D.B. et al. (2012) *Genes and Dev.*, 26, 325–327.

CERTIFICATE OF ANALYSIS

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