**SET8 Methyltransferase**

**M0428S**

| 100 units | 2,000 U/ml | Lot: 0031512 |
| RECOMBINANT | Store at –20°C | Exp: 12/16 |

**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 MgCl₂
- 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 1 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.

---

**SET8 Methyltransferase**

**M0428S**

| 100 units | 2,000 U/ml | Lot: 0031512 |
| RECOMBINANT | Store at –20°C | Exp: 12/16 |

**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 MgCl₂
- 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:**