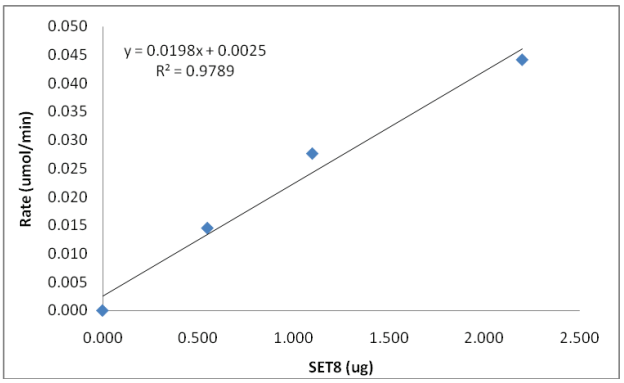
Product Information

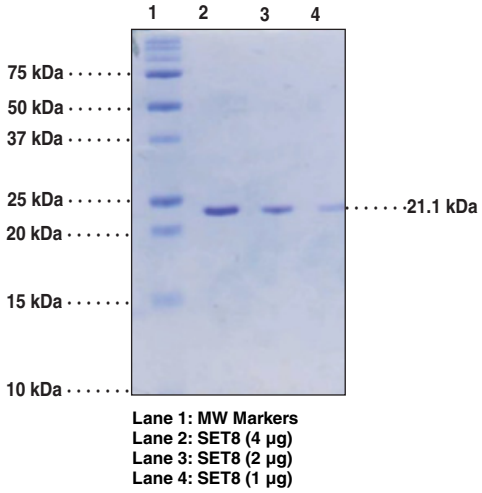
SET8 (human recombinant)

Item No. 10319 • Lot No. XXXX

Synonyms:	KMT5a, PR-Set7, SETD8, SET domain containing (lysine methyltransferase) 8
Source:	Recombinant N-terminal Hexahistadine-tagged SET8 amino acids 190-352, purified from *E. coli*, NP_065115
M_r:	21.1 kDa
Purity:	≥95%
Stability:	≥6 months at -80°C; avoid freeze/thaw cycles by aliquoting the protein and storing at -80°C
Supplied in:	50 mM sodium phosphate, pH 7.2, containing 100 mM NaCl and 20% glycerol
Protein Concentration:	XX mg/ml
Activity:	XX nmol/min/ml
Specific Activity:	XX nmol/min/mg; determined using 5 mM H4K20 peptide (AKRHRKVLRD) at 37°C using Cayman's Methyltransferase Colorimetric Assay Kit (Item No. 700140)

Methylation of lysine can promote transcriptional activation or repression and is critical in regulating histone function. Lysine residues can be mono-, di-, or tri-methylated.[1] SET8 selectively mono-methylates histone H4 at lysine 20, an event proven to have an important role in chromatin structure and transcriptional activation.[3,4] SET8 is also a novel regulator of p53, mono-methylating lysine 382 of the tumor suppressor.[5] SET8's ability to suppress p53 transcriptional activity implies that it may play a significant role in tumorigenesis.





Lane 1: MW Markers
Lane 2: SET8 (4 µg)
Lane 3: SET8 (2 µg)
Lane 4: SET8 (1 µg)

References

1. Bhaumik, S.R., Smith, E., and Shilatifard, A. Covalent modifications of histones during development and disease pathogenesis. *Nature Structural & Molecular Biology* **14(11)**, 1008-1016 (2007).
2. Couture, J.-F., Collazo, E., Brunzelle, J.S., *et al.* Structural and functional analysis of SET8, a histone H4 Lys-20 methyltransferase. *Genes & Development* **19**, 1455-1465 (2005).
3. Yin, Y., Liu, C., Tsai, S.N., *et al.* SET8 recognizes the sequence RHRK20VLRDN within the N terminus of histone H_4 and mono-methylates lysine 20. *J. Biol. Chem.* **280(34)**, 30025-30031 (2005).
4. Shi, X., Kachirskaia, I., Yamaguchi, H., *et al.* Modulation of p53 function by SET8-mediated methylation at lysine 382. *Mol. Cell.* **27(4)**, 636-646 (2007).

Related Products

LSD1 (human recombinant) - Item No. 10245 • SET7/9 (human recombinant) - Item No. 10320 • JMJD2D (human recombinant) - Item No. 10335 • PRMT1 (human recombinant) - Item No. 10350 • G9a (human recombinant, partial) - Item No. 10353 • Histone H4K20 Peptide - Item No. 10380 • WDR5 (human recombinant) - Item No. 10944 • Ash2L (human recombinant) - Item No. 10946 • Methyltransferase Colorimetric Assay Kit - Item No. 700140 • Methyltransferase Fluorometric Assay Kit - Item No. 700150

WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY: NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

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