Recombinant EHMT2 (G9a) protein



Catalog No: 31327 Lot No: 14417003 Expressed In: *E. coli*

Quantity: 10 µg Concentration: 2 µg/µl Source: Human

Buffer Contents: 10 μg recombinant EHMT2 (G9a) protein supplied at 2 μg / μl in 20 mM Tris-HCl, pH 7.3, 100 mM KCl, 0.2 mM EDTA and 20% glycerol.

Background: EHMT2 (G9a) is a histone methyltransferase that specifically mono- and dimethylates Lys9 of histone H3 (H3K9me1 and H3K9me2, respectively) in euchromatin. H3K9me represents a specific tag for epigenetic transcriptional repression by initiating recruitment of HP1 proteins to methylated histones. EHMT2 (G9a) also mediates monomethylation of Lys56 of histone H3 (H3K56me1) in G1 phase and regulates DNA replication by promoting the interaction between histone H3 and PCNA. EHMT2 (G9a) also weakly methylates Lys27 of histone H3 (H3K27me). In addition, EHMT2 (G9a) is required for DNA methylation, suggesting that these 2 activities function independently. EHMT2 (G9a) is most likely targeted to histone H3 by different DNA-binding proteins like E2F6, MGA, MAX and/or DP1. EHMT2 (G9a) may also methylates non-histone proteins. It has been shown to mediates dimethylation of Lys373 of p53 and also methylates CDYL, WIZ, ACIN1, DNMT1, HDAC1, ERCC6, KLF12 and itself.

Protein Details: EHMT2 (G9a) is a histone methyltransferase that is specific to lysine 9 of histone H3 (H3K9). Methylation of H3K9 is a signal of transcriptional repression. Recombinant EHMT2 (G9a) was expressed as amino acids 530-1210 of human protein (accession number NP_006700.3) with an N-terminal His-Tag.

Application Notes: Recombinant EHMT2 (G9a) is suitable for use in methyltransferase assays. A recommended starting point for the methyltransferase assay is 50-200 ng of recombinant protein per reaction. The molecular weight of the protein is ~81 kDa.

Storage and Guarantee: Recombinant proteins in solution are temperature sensitive and must be stored at -80°C to prevent degradation. Avoid repeated freeze/thaw cycles and keep on ice when not in storage. This product is guaranteed for 6 months from date of receipt.

This product is for research use only and is not for use in diagnostic procedures.