Recombinant EHMT2 protein (His tag)

Catalog Number	543390
Synonyms	Euchromatic histone-lysine N-methyltransferase 2; HLA-B-associated transcript 8; Histone H3-K9 methyltransferase 3; H3-K9-HMTase 3; Lysine N-methyltransferase 1C; Protein G9a
Species	Human
Expression System	E. coli
Accession	Q96KQ7
Molecular Weight	Predictes a molecular mass of 15.51 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 16 kDa band.

Product Information

Sequence Region	426-550
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>90%, by SDS-PAGE with Coomassie Brilliant Blue staining.
Endotoxin	Not tested.
Activity	Not tested.
Stability	Samples are stable for up to twelve months from date of receipt at -70℃
Protein Construction	DNA encoding 426-550 aa (Q96KQ7) were fused with 6His tag.

Storage & Handling

Reconstitution	Reconstitute at 0.25 μg/μl in sterile water for short-term storage. Reconstitution with 50% glycerol solution is recommended for longer term storage (see Stability and Storage for more details). If a different concentration is needed for your purposes please adjust the reconstitution volume as required (please note: the ion concentration of the final solution will vary according to the volume used). Note: Centrifuge vial before opening. When reconstituting, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution.
Storage	Store it under sterile conditions at -20℃ to -80℃. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.
Shipping	In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature. Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice unless customers require otherwise.

Description

Description	This product features a recombinant fragment (residues 426-550) of the human Histone-lysine N-methyltransferase EHMT2, also known as G9a. This fragment has been computationally selected for its stability and solubility, making it an ideal tool for structural studies and biochemical assays focused on EHMT2's role in epigenetic regulation. EHMT2 is a key histone methyltransferase that primarily mono- and dimethylates lysine 9 on histone H3 (H3K9me1 and H3K9me2) in euchromatin, serving as an epigenetic mark for transcriptional repression by recruiting HP1 proteins. It also monomethylates H3K56 during the G1 phase to regulate DNA replication and weakly methylates H3K27. Beyond histones, EHMT2 methylates non-histone proteins, including p53, DNMT1, and HDAC1, and is involved in DNA methylation independently of its histone methyltransferase activity. Located in the nucleus and associated with euchromatic regions of chromosomes, EHMT2 is targeted to histone H3 by DNA-binding proteins such as E2F6 and MAX, playing a critical role in gene silencing and cellular processes.