Recombinant KMT2E protein (His tag)

Catalog Number	545398
Synonyms	Inactive lysine N-methyltransferase 2E; Myeloid/lymphoid or mixed-lineage leukemia protein 5
Species	Human
Expression System	E. coli
Accession	Q8IZD2
Molecular Weight	Predictes a molecular mass of 25.00 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 25 kDa band.

Product Information

Sequence Region	275-474
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 275-474 aa (Q8IZD2) 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	Recombinant Human KMT2E Protein Fragment (aa 275-474): A high-purity, 200-amino acid fragment encompassing the critical SET domain (aa 330-447) of the Inactive Histone-Lysine N-Methyltransferase 2E. This product is an essential research tool for investigating chromatin regulation, histone modification, and transcriptional control mechanisms in epigenetic studies. The full-length KMT2E protein (UniProt ID: Q8IZD2) is a key epigenetic regulator that associates with chromatin regions downstream of transcriptional start sites of active genes, modulating gene transcription through interaction with tri-methylated histone H3 at Lys-4 (H3K4me3). It plays crucial roles in hematopoiesis, terminal myeloid differentiation, hematopoietic stem cell self-renewal via DNA methylation mechanisms, and cell cycle regulation across multiple stages including G1/S transition, S phase progression, and mitotic entry. KMT2E localizes to chromosomes during interphase and centrosomes during mitosis, with dissociation from mitotic chromosomes likely mediated by histone H3 phosphorylation. The protein's involvement in E2F1-responsive promoter activation and myoblast differentiation further underscores its significance in cellular development and proliferation pathways.