Recombinant DPH5 protein (His tag)

Catalog Number	541243
Synonyms	Diphthamide biosynthesis methyltransferase
Species	Human
Expression System	E. coli
Accession	Q9H2P9
Molecular Weight	Predictes a molecular mass of 33.31 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 35 kDa band.

Product Information

Sequence Region	1-285
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>85%, 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 1-285 aa (Q9H2P9) 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 Diphthine methyl ester synthase (DPH5) fragment (residues 1-285) from Homo sapiens, a key enzyme in diphthamide biosynthesis. This stable, soluble fragment is optimized for structural and biochemical studies, enabling research into methylation mechanisms in eukaryotic translation regulation. Diphthine methyl ester synthase (EC 2.1.1.314) is an S-adenosyl-L-methionine-dependent methyltransferase that catalyzes four sequential methylation reactions on a modified histidine residue in translation elongation factor 2 (EF-2), forming diphthine methyl ester. This represents the second critical step in diphthamide biosynthesis, a conserved post-translational modification essential for EF-2 function in protein synthesis. The enzyme's activity has been characterized through orthologous studies and experimental evidence, highlighting its role in maintaining translational fidelity in human cells.