Recombinant TMLH protein (His tag)

Catalog Number	546078
Synonyms	Epsilon-trimethyllysine 2-oxoglutarate dioxygenase; Epsilon-trimethyllysine hydroxylase; TML hydroxylase; TML-alpha-ketoglutarate dioxygenase; TML dioxygenase; TMLD
Species	Human
Expression System	E. coli
Accession	Q9NVH6
Molecular Weight	Predictes a molecular mass of 45.50 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 46 kDa band.

Product Information

Sequence Region	50-421
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 50-421 aa (Q9NVH6) 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 is a recombinant fragment of human Trimethyllysine Dioxygenase (TMLHE), encompassing amino acids 50-421. It represents a stable, soluble unit ideal for investigating the enzyme's role in catalyzing the conversion of trimethyllysine to hydroxytrimethyllysine, supporting structural and biochemical research. Trimethyllysine dioxygenase (TMLHE) is a mitochondrial matrix enzyme that catalyzes the hydroxylation of trimethyllysine (TML) to hydroxytrimethyllysine (HTML), a critical step in carnitine biosynthesis. This reaction, dependent on 2-oxoglutarate as a co-substrate, is essential for energy metabolism, as carnitine facilitates fatty acid transport into mitochondria for β-oxidation. The enzyme's localization within the mitochondrial matrix underscores its role in metabolic pathways central to cellular energy production.