Recombinant CLYBL protein (His tag)

Catalog Number	540720
Synonyms	(3S)-malyl-CoA thioesterase; Beta-methylmalate synthase; Citrate lyase subunit beta-like protein; Citrate lyase beta-like; Malate synthase
Species	Human
Expression System	E. coli
Accession	Q8N0X4
Molecular Weight	Predictes a molecular mass of 34.96 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 36 kDa band.

Product Information

Sequence Region	40-340
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>86%, 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 40-340 aa (Q8N0X4) 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 Citramalyl-CoA Lyase (CLYBL) Fragment (residues 40-340) is a high-purity, stable protein derived from human mitochondrial citramalyl-CoA lyase. This fragment is optimized for structural and biochemical studies, offering a soluble unit ideal for investigating its roles in vitamin B12 metabolism and C5-dicarboxylate catabolism pathways. The full-length Citramalyl-CoA Lyase (CLYBL) is a mitochondrial enzyme encoded by the CLYBL gene in humans. It plays a critical role in vitamin B12 metabolism by detoxifying itaconate, a metabolite that interferes with vitamin B12 function, through the C5-dicarboxylate catabolism pathway where it converts citramalyl-CoA into acetyl-CoA and pyruvate. Additionally, CLYBL exhibits multiple enzymatic activities in vitro, including malate synthase, beta-methylmalate synthase, malyl-CoA thioesterase, and weak citramalate synthase activity, highlighting its versatility in metabolic processes. Its mitochondrial localization underscores its importance in cellular energy and detoxification pathways, making it a key target for metabolic and biochemical research.