Recombinant HMCS2 protein (His tag)

Catalog Number	547082
Synonyms	HMG-CoA synthase; 3-hydroxy-3-methylglutaryl coenzyme A synthase
Species	Human
Expression System	E. coli
Accession	P54868
Molecular Weight	Predictes a molecular mass of 52.99 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 53 kDa band.

Product Information

Sequence Region	49-508
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 49-508 aa (P54868) 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	Introducing the recombinant human Hydroxymethylglutaryl-CoA synthase, mitochondrial (HMG-CoA synthase) fragment (residues 49-508), a 460-amino acid construct engineered for stability and solubility. This fragment enables detailed structural and biochemical investigations into the enzyme's role in ketogenesis, providing researchers with a reliable tool for metabolic pathway analysis. Hydroxymethylglutaryl-CoA synthase (HMGCS2) is a mitochondrial enzyme that catalyzes the first irreversible step in ketogenesis, condensing acetyl-CoA with acetoacetyl-CoA to form HMG-CoA. This reaction is critical for ketone body production, serving as an alternative energy source during fasting or metabolic stress. Located within the mitochondrion, HMGCS2 functions upstream of HMG-CoA reductase in the mevalonate pathway, highlighting its importance in lipid metabolism and energy homeostasis. The enzyme's activity has been characterized in studies linking it to metabolic regulation and energy balance.