Recombinant GCDH protein (His tag)

Catalog Number	540921
Synonyms	GCD
Species	Human
Expression System	E. coli
Accession	Q92947
Molecular Weight	Predictes a molecular mass of 45.12 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 45 kDa band.

Product Information

Sequence Region	45-438
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>89%, 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 45-438 aa (Q92947) 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 Glutaryl-CoA Dehydrogenase, Mitochondrial (GCD) Fragment (residues 45-438) is a high-purity, stable protein designed for structural and biochemical studies. This fragment encompasses the core functional domain of GCD, facilitating research into its role in lysine and tryptophan metabolism. Glutaryl-CoA dehydrogenase (GCD), encoded by the GCDH gene, is a mitochondrial matrix enzyme that catalyzes the oxidative decarboxylation of glutaryl-CoA to crotonyl-CoA and CO_2. This reaction is essential in the degradative pathways of L-lysine, L-hydroxylysine, and L-tryptophan, utilizing electron transfer flavoprotein as an electron acceptor. GCD's activity is critical for metabolic homeostasis, and its dysfunction is linked to glutaric acidemia type I, underscoring its importance in biochemical and disease research.