Recombinant DHE3 protein (His tag)

Catalog Number	544260
Synonyms	GDH 1
Species	Human
Expression System	E. coli
Accession	P00367
Molecular Weight	Predictes a molecular mass of 57.09 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 58 kDa band.

Product Information

Sequence Region	60-558
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 60-558 aa (P00367) 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 Glutamate dehydrogenase 1, mitochondrial (GDH 1) fragment (residues 60-558) from Homo sapiens offers a stable and soluble unit for advanced structural and biochemical studies, enabling precise investigation of glutamate metabolism and energy regulation pathways. Glutamate dehydrogenase 1 (GDH 1), encoded by the GLUD1 gene, is a mitochondrial enzyme that catalyzes the conversion of L-glutamate into alpha-ketoglutarate, a critical intermediate in the tricarboxylic acid cycle. This reaction supports glutamine anaplerosis, contributing to cellular energy production and metabolic homeostasis. GDH 1 also plays a role in insulin regulation and may influence learning and memory processes by modulating glutamate neurotransmitter turnover. Predominantly localized to the mitochondria with minor presence in the endoplasmic reticulum, this enzyme is essential for understanding metabolic disorders and neurological functions.