Recombinant PROD protein (His tag)

Catalog Number	533637
Synonyms	Proline oxidase
Species	Caenorhabditis elegans
Expression System	E. coli
Accession	O45228
Gene ID	178350
Molecular Weight	Predictes a molecular mass of 32.58 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 33 kDa band.

Product Information

Sequence Region	347-616
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 347-616 aa (O45228) 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 Proline dehydrogenase 1, mitochondrial (EC 1.5.5.2), also known as Proline oxidase, from Caenorhabditis elegans. This high-quality fragment (residues 347-616) is engineered for stability and solubility, ideal for structural studies and biochemical assays. Proline dehydrogenase 1, mitochondrial, encoded by the prdh-1 gene, catalyzes the conversion of proline to delta-1-pyrroline-5-carboxylate. It plays a critical role in proline catabolism, promoting reactive oxygen species (ROS) production and activating the transcription of skn-1 target genes in response to bacterial infections, such as those caused by Pseudomonas aeruginosa. The protein is localized to the mitochondrial matrix, underscoring its importance in cellular energy and stress response pathways. This fragment was computationally selected to represent a stable, soluble unit, facilitating detailed mechanistic and structural investigations.