Recombinant 6PGD protein (His tag)

Catalog Number	535807
Species	Caenorhabditis elegans
Expression System	E. coli
Accession	Q17761
Gene ID	177971
Molecular Weight	Predictes a molecular mass of 54.85 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 55 kDa band.

Product Information

Sequence Region	1-484
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 1-484 aa (Q17761) 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 6-phosphogluconate dehydrogenase, decarboxylating (EC 1.1.1.44) fragment (residues 1-484) from Caenorhabditis elegans. This high-purity, soluble protein is ideal for enzymatic assays, structural studies, and metabolic pathway research, offering reliable performance in NADPH generation and pentose phosphate pathway investigations. 6-phosphogluconate dehydrogenase (EC 1.1.1.44) is a key enzyme in the oxidative phase of the pentose phosphate pathway, catalyzing the oxidative decarboxylation of 6-phosphogluconate to ribulose 5-phosphate and CO_2 while reducing $NADP^+$ to NADPH. This reaction is essential for maintaining cellular redox balance and providing ribose 5-phosphate for nucleotide synthesis. The recombinant fragment (residues 1-484) represents a stable, soluble unit computationally optimized for structural and biochemical analyses, preserving the catalytic activity described in UniProt entry Q17761.