Recombinant IPYR protein (His tag)

Catalog Number	532732
Synonyms	Pyrophosphate phospho-hydrolase; PPase
Species	Caenorhabditis elegans
Expression System	E. coli
Accession	Q18680
Gene ID	177856
Molecular Weight	Predictes a molecular mass of 33.24 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 36 kDa band.

Product Information

Sequence Region	145-427
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>85%, 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 145-427 aa (Q18680) 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 Inorganic Pyrophosphatase 1 (PPase) Fragment (145-427) from Caenorhabditis elegans, a highly soluble and stable protein unit designed for structural and biochemical studies. This fragment retains key functional characteristics, making it ideal for investigating pyrophosphate hydrolysis mechanisms and enzyme kinetics. Inorganic pyrophosphatase 1 (EC 3.6.1.1) catalyzes the essential hydrolysis of inorganic pyrophosphate (PPi) into two phosphate ions, a critical reaction in energy metabolism and biosynthetic pathways. In Caenorhabditis elegans, this enzyme plays a vital role in intestinal development, ensuring proper secretory, digestive, and absorption functions, and is required for normal larval development. The protein localizes to the cytoplasm, particularly around intestinal granules and vacuoles, highlighting its involvement in cellular metabolic processes. The selected fragment (residues 145-427) represents a stable, soluble domain optimized for experimental applications without compromising functional relevance.