Recombinant GUAA protein (His tag)

Catalog Number	534788
Synonyms	Glutamine amidotransferase
Species	Caenorhabditis elegans
Expression System	E. coli
Accession	Q09580
Gene ID	174672
Molecular Weight	Predictes a molecular mass of 39.56 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 41 kDa band.

Product Information

Sequence Region	53-396
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>86%, 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 53-396 aa (Q09580) 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 Probable GMP synthase [glutamine-hydrolyzing] fragment (residues 53-396) from Caenorhabditis elegans, encompassing the complete Glutamine amidotransferase type-1 domain. This high-purity protein fragment serves as an essential tool for investigating domain-specific catalytic functions in nucleotide biosynthesis pathways. The full-length Probable GMP synthase [glutamine-hydrolyzing] (encoded by gene gmps-1) is a glutamine amidotransferase enzyme (EC 6.3.5.2) that plays a critical role in de novo purine biosynthesis by catalyzing the ATP-dependent conversion of xanthine 5'-monophosphate (XMP) to guanosine 5'-monophosphate (GMP). This enzymatic reaction is essential for maintaining cellular nucleotide pools and supporting fundamental biological processes including DNA/RNA synthesis and energy metabolism. The recombinant fragment (residues 53-396) specifically contains the Glutamine amidotransferase type-1 domain (residues 60-252), enabling focused studies on glutamine hydrolysis and nitrogen transfer mechanisms without interference from other protein regions.