Recombinant PYM1 protein (His tag)

Catalog Number	548107
Synonyms	PYM homolog 1 exon junction complex-associated factor; Protein wibg homolog
Species	Human
Expression System	E. coli
Accession	Q9BRP8
Molecular Weight	Predictes a molecular mass of 14.28 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 14 kDa band.

Product Information

Sequence Region	1-113
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 1-113 aa (Q9BRP8) 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 Human PYM1 (Partner of Y14 and mago) Fragment (1-113) - A highly stable and soluble protein fragment ideal for structural and biochemical studies of the exon junction complex (EJC) regulatory machinery. This carefully selected fragment represents a key functional unit of PYM1, enabling researchers to investigate EJC disassembly mechanisms and mRNA processing regulation. Partner of Y14 and mago (PYM1) serves as a crucial regulator of the exon junction complex (EJC), a multiprotein complex that marks exon-exon junctions on mRNAs and directs essential post-transcriptional processes including mRNA export, nonsense-mediated mRNA decay (NMD), and translation. PYM1 functions as an EJC disassembly factor, facilitating translation-dependent removal and recycling of the complex from spliced mRNAs. By disrupting mature EJC complexes, PYM1 interferes with NMD and enhances translation of spliced mRNAs. The protein shuttles between nuclear compartments (nucleolus and nucleoplasm) and the cytoplasm, with nuclear export mediated by XPO1/CRM1. Its association with the 40S ribosomal subunit likely prevents premature EJC disassembly, ensuring that complex removal occurs only on translated mRNAs. The selected 1-113 fragment was computationally designed to provide a stable, soluble unit suitable for detailed mechanistic studies of PYM1's role in mRNA processing regulation.