Recombinant PGAM5 protein (His tag)

Catalog Number	541004
Synonyms	Bcl-XL-binding protein v68; Phosphoglycerate mutase family member 5
Species	Human
Expression System	E. coli
Accession	Q96HS1
Molecular Weight	Predictes a molecular mass of 28.63 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 29 kDa band.

Product Information

Sequence Region	53-289
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 53-289 aa (Q96HS1) 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 PGAM5 (53-289) is a high-quality protein fragment of Serine/threonine-protein phosphatase PGAM5, mitochondrial, specifically engineered for structural and biochemical research. This 237-amino acid fragment represents a stable, soluble unit ideal for investigating mitochondrial phosphatase function, cellular senescence regulation, and mitophagy mechanisms. Serine/threonine-protein phosphatase PGAM5 is a mitochondrial enzyme (EC 3.1.3.16) that plays crucial roles in multiple cellular processes through its dephosphorylation activity. Located primarily in mitochondrial membranes, PGAM5 regulates mitochondrial dynamics by dephosphorylating key proteins including DNM1L/DRP1 for mitochondrial fission and MFN2 to promote mitochondrial network formation. The protein is central to cellular senescence modulation and mitophagy regulation, where it dephosphorylates FUNDC1 independent of PARKIN to facilitate LC3 interaction. Additionally, PGAM5 functions in anti-oxidative response through its interaction with KEAP1 and NRF2, and regulates necroptosis by serving as a RIPK3 target that recruits the RIPK1-RIPK3-MLKL necrosis complex to mitochondria. The full-length protein exhibits dual localization to both mitochondrial outer and inner membranes as a single-pass membrane protein.