Recombinant MINP1 protein (His tag)

Catalog Number	548522
Synonyms	2,3-bisphosphoglycerate 3-phosphatase; 2,3-BPG phosphatase
Species	Human
Expression System	E. coli
Accession	Q9UNW1
Molecular Weight	Predictes a molecular mass of 52.85 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 53 kDa band.

Product Information

Sequence Region	39-487
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 39-487 aa (Q9UNW1) 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 Multiple Inositol Polyphosphate Phosphatase 1 (MINPP1) Fragment (residues 39-487) is a highly purified protein designed for structural and biochemical studies. This fragment encompasses a stable, soluble region of MINPP1, retaining key enzymatic activities including hydrolysis of inositol polyphosphates and potential 2,3-bisphosphoglycerate phosphatase function, making it an ideal tool for investigating cellular signaling and metabolic regulation. Multiple inositol polyphosphate phosphatase 1 (MINPP1) is a critical enzyme in human cells that hydrolyzes inositol polyphosphates such as InsP5 and InsP6, regulating their availability as second messengers and metal chelators. This activity influences intracellular calcium and iron levels, which are vital for neuronal development and homeostasis. MINPP1 also exhibits 2,3-bisphosphoglycerate 3-phosphatase activity, contributing to systemic oxygen homeostasis by modulating hemoglobin's oxygen affinity. The full-length protein is primarily localized to the endoplasmic reticulum lumen but can also be secreted or associated with the plasma membrane, particularly in erythrocytes, highlighting its diverse roles in cellular physiology and metabolism.