Recombinant IP3KA protein (His tag)

Catalog Number	542210
Synonyms	Inositol 1,4,5-trisphosphate 3-kinase A; IP3 3-kinase A; IP3K A; InsP 3-kinase A
Species	Human
Expression System	E. coli
Accession	P23677
Molecular Weight	Predictes a molecular mass of 32.03 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 35 kDa band.

Product Information

Sequence Region	197-461
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 197-461 aa (P23677) 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 Inositol-trisphosphate 3-kinase A (ITPKA) fragment (residues 197-461) from Homo sapiens, designed for structural and biochemical studies. This stable, soluble fragment retains catalytic activity, enabling research into calcium signaling regulation through phosphorylation of inositol trisphosphate. Inositol-trisphosphate 3-kinase A (ITPKA) is a key enzyme in calcium homeostasis, catalyzing the phosphorylation of 1D-myo-inositol 1,4,5-trisphosphate (InsP3) to produce 1D-myo-inositol 1,3,4,5-tetrakisphosphate. This reaction modulates intracellular calcium signaling pathways critical for cellular processes. The full-length protein is localized in the cytoplasm and cytoskeleton, where it interacts with structural components to regulate its activity. The provided fragment (residues 197-461) represents a computationally optimized, stable region suitable for investigating the enzyme's kinetic properties and structural features without domain interference.