Recombinant IPKA protein (His tag)

Catalog Number	542453
Synonyms	PKI-alpha; cAMP-dependent protein kinase inhibitor, muscle/brain isoform
Species	Human
Expression System	E. coli
Accession	P61925
Molecular Weight	Predictes a molecular mass of 9.51 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 11 kDa band.

Product Information

Sequence Region	2-76
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>85%, 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 2-76 aa (P61925) 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 PKI-alpha (2-76) is a potent, soluble fragment of the cAMP-dependent protein kinase inhibitor alpha, specifically designed for structural and biochemical studies. This fragment retains high inhibitory activity against cAMP-dependent protein kinase, offering researchers a stable and functional tool for investigating kinase regulation and signaling pathways. The full-length PKI-alpha protein is an extremely potent competitive inhibitor of cAMP-dependent protein kinase (PKA) activity. It functions by binding to the catalytic subunit of PKA after cAMP-induced dissociation of the regulatory chains, thereby effectively blocking kinase activity. This mechanism is critical for regulating PKA signaling in various cellular processes. The recombinant fragment (residues 2-76) represents a stable and soluble unit computationally selected to facilitate experimental analysis of PKI-alpha's inhibitory function and structural properties.