Recombinant KAPCA protein (His tag)

Catalog Number	546802
Synonyms	PKA C-alpha
Species	Human
Expression System	E. coli
Accession	P17612
Molecular Weight	Predictes a molecular mass of 42.12 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 43 kDa band.

Product Information

Sequence Region	2-351
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 2-351 aa (P17612) 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 PKA C-alpha (PRKACA) Fragment (residues 2-351) is a high-purity protein encompassing the complete catalytic core and AGC-kinase C-terminal domain. This product enables targeted investigation of cAMP-dependent kinase activity and substrate interactions, providing researchers with a precise tool for studying phosphorylation-mediated signaling pathways. cAMP-dependent protein kinase catalytic subunit alpha (PKA C-alpha) is a central signaling kinase in human cells that phosphorylates numerous cytoplasmic and nuclear substrates, including CDC25B, NFKB1, RYR2, and VASP. It regulates diverse processes such as platelet aggregation, glucose-mediated differentiation, proteasome activity, and embryonic development through the Hedgehog signaling pathway. The protein localizes to the cytoplasm, nucleus, cell membrane, and mitochondria, with isoform-specific functions in sperm flagella. This recombinant fragment retains key functional domains essential for catalytic activity and substrate recognition, making it invaluable for mechanistic studies of PKA-mediated phosphorylation events.