Recombinant KPCG protein (His tag)

Catalog Number	542019
Synonyms	PKC-gamma
Species	Human
Expression System	E. coli
Accession	P05129
Molecular Weight	Predictes a molecular mass of 41.32 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 43 kDa band.

Product Information

Sequence Region	346-697
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 346-697 aa (P05129) 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 Protein Kinase C Gamma Type (PKC-gamma) Fragment (346-697) is a high-purity protein designed for studying calcium-activated, phospholipid-dependent serine/threonine kinase activity. This fragment encompasses the complete AGC-kinase C-terminal domain, making it an ideal tool for investigating kinase regulation, neuronal signaling pathways, and receptor modulation in neurological and pain research. Protein Kinase C Gamma Type (PKC-gamma), encoded by the PRKCG gene, is a calcium-activated serine/threonine-protein kinase that plays diverse roles in neuronal function and cellular signaling. It regulates key neuronal receptors including GRIA4/GLUR4 and GRIN1/NMDAR1, modulating synaptic plasticity, memory acquisition, and learning processes. The kinase is involved in neuropathic pain mechanisms, opiate sensitivity, alcohol tolerance, and contributes to cell survival following cerebral ischemia. PKC-gamma also phosphorylates critical targets such as p53/TP53 to promote DNA damage-induced apoptosis and stabilizes circadian clock components. Located primarily in the cytoplasm with translocation to synaptic membranes upon stimulation, this kinase demonstrates perinuclear localization and presence in dendrites and synaptosomes, highlighting its importance in neuronal signaling complexes and membrane-associated functions.