Recombinant KPCD1 protein (His tag)

Catalog Number	545014
Synonyms	Protein kinase C mu type; Protein kinase D; nPKC-D1; nPKC-mu
Species	Human
Expression System	E. coli
Accession	Q15139
Molecular Weight	Predictes a molecular mass of 40.45 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 42 kDa band.

Product Information

Sequence Region	576-912
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 576-912 aa (Q15139) 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 Serine/threonine-protein kinase D1 (PRKD1) Fragment (aa 576-912) is a high-purity protein product encompassing the complete protein kinase domain (aa 583-839). This fragment serves as an essential tool for investigating kinase activity, signal transduction mechanisms, and domain-specific functions in cellular processes such as proliferation, differentiation, and stress response. Serine/threonine-protein kinase D1 (PRKD1), also known as Protein kinase C mu type or nPKC-mu, is a key regulatory enzyme that converts transient diacylglycerol signals into prolonged physiological effects downstream of PKC. It plays critical roles in MAPK8/JNK1 and Ras signaling, Golgi membrane integrity and trafficking, cell survival through NF-kappa-B activation, cell migration, differentiation via HDAC7 nuclear export, and proliferation through MAPK1/3 signaling. The protein is involved in cardiac hypertrophy, VEGFA-induced angiogenesis, genotoxic-induced apoptosis, and inflammatory responses. PRKD1 localizes to the cytoplasm, cell membrane, and trans-Golgi network, with membrane translocation required for kinase activation. The full-length protein's diverse functions make this kinase domain fragment particularly valuable for studying specific catalytic activities and signaling mechanisms.