Recombinant KKCC1 protein (His tag)

Catalog Number	547744
Synonyms	CaM-KK 1; CaM-kinase kinase 1; CaMKK 1; CaM-kinase IV kinase; Calcium/calmodulin-dependent protein kinase kinase alpha; CaM-KK alpha; CaM-kinase kinase alpha; CaMKK alpha
Species	Human
Expression System	E. coli
Accession	Q8N5S9
Molecular Weight	Predictes a molecular mass of 40.88 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 44 kDa band.

Product Information

Sequence Region	107-455
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 107-455 aa (Q8N5S9) 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 Calcium/calmodulin-dependent protein kinase kinase 1 (CaM-KK 1) fragment (residues 107-455), encompassing the complete protein kinase domain. This high-purity protein is an essential tool for investigating calcium/calmodulin-dependent signaling pathways, kinase activity, and cellular survival mechanisms in experimental models. Calcium/calmodulin-dependent protein kinase kinase 1 (CaM-KK 1) is a key regulatory enzyme in a calcium-triggered signaling cascade that participates in multiple cellular processes. It functions by phosphorylates downstream kinases CAMK1, CAMK1D, CAMK1G, and CAMK4, thereby activating further signaling events. Notably, CaM-KK 1 plays a critical role in cell survival through phosphorylation of AKT1/PKB, which inhibits the pro-apoptotic protein BAD and promotes cell viability. The protein is localized in both the cytoplasm and nucleus, indicating its involvement in diverse subcellular signaling contexts. The provided recombinant fragment spans residues 107-455 and includes the complete protein kinase domain (residues 128-409), enabling focused studies on the catalytic functions and regulatory mechanisms of this important kinase.