## Recombinant Human CAMK1/CaMKI-alpha Protein (His Tag)

Catalog No. PKSH033741

Note: Centrifuge before opening to ensure complete recovery of vial contents.

Description			
Synonyms	Calcium/Calmodulin-Dependent Protein Kinase Type 1;CaM Kinase I;CaM- KI;CaM Kinase I Alpha;CaMKI-Alpha;CAMK1		
Species	Human		
Expression Host	HEK293 Cells		
Sequence	Met1-Leu370		
Accession	Q14012		
Calculated Molecular Weight	42.3 kDa		
Observed molecular weight	42 kDa		
Tag	C-His		
Bioactivity	Not validated for activity		
Properties			
Purity	> 90 % as determined by reducing SDS-PAGE.		
Endotoxin	< 1.0 EU per $\mu$ g of the protein as determined by the LAL method.		
Storage	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.		
Shipping	This product is provided as lyophilized powder which is shipped with ice packs.		
Formulation	Lyophilized from a 0.2 µm filtered solution of 20mM PB,150mM NaCl,pH7.4. Normally 5% - 8% trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization. Please refer to the specific buffer information in the printed manual.		
Reconstitution	Please refer to the printed manual for detailed information.		
Data			

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> 90 % as determined by reducing SDS-PAGE.

## Background

Calcium/Calmodulin-Dependent Protein Kinase Type 1 (CAMK1) belongs to the protein kinase superfamily, CAMK

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Ser/Thr protein kinase family, and CaMK subfamily. CAMK1 contains one protein kinase domain and widely expressed. CAMK1 is phosphorylated by CaMKK1 and CaMKK2 on Thr-177. CAMK1 regulates transcription activators activity, cell cycle, hormone production, cell differentiation, actin filament organization, and neurite outgrowth. CAMK1 plays a role in K+ and ANG2-mediated regulation of the aldosterone synthase (CYP11B2) to produce aldosterone in the adrenal cortex.

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