

## Recombinant Human CAMK2A/CAMKA Protein (GST Tag)

Catalog No. PKSH030403

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

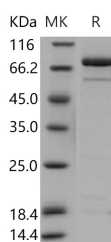
### Description

<b>Synonyms</b>	CAMKA
<b>Species</b>	Human
<b>Expression Host</b>	Baculovirus-Insect Cells
<b>Sequence</b>	Met 1-His 478
<b>Accession</b>	NP_741960.1
<b>Calculated Molecular Weight</b>	80.3 kDa
<b>Observed molecular weight</b>	80 kDa
<b>Tag</b>	N-GST
<b>Bioactivity</b>	The specific activity was determined to be 160 nmol/min/mg using Autocamtide-2 synthetic peptide (KKALRRQETVDAL-amide) as substrate.

### Properties

<b>Purity</b>	> 85 % as determined by reducing SDS-PAGE.
<b>Endotoxin</b>	< 1.0 EU per µg of the protein as determined by the LAL method.
<b>Storage</b>	Store at < -20°C, stable for 6 months. Please minimize freeze-thaw cycles.
<b>Shipping</b>	This product is provided as liquid. It is shipped at frozen temperature with blue ice/gel packs. Upon receipt, store it immediately at < -20°C.
<b>Formulation</b>	Supplied as sterile solution of 50mM Tris, 100mM NaCl, 0.5mM PMSF, 0.5mM Reduced Glutathione, pH 8.0
<b>Reconstitution</b>	Not Applicable

### Data



> 85 % as determined by reducing SDS-PAGE.

### Background

Ca<sup>2+</sup>/calmodulin-dependent protein kinase2A (CAMK2A) belongs to the serine/threonine protein kinase family and, together with other 28 different isoforms, belongs to the Ca<sup>2+</sup>/calmodulin-dependent protein kinase subfamily. CaM kinase II is thought to be an important mediator of learning and memory and is also necessary for Ca<sup>2+</sup> homeostasis and reuptake in cardiomyocytes chloride transport in epithelia, positive T-cell selection, and CD8 T-cell activation. CAMKIIA

### For Research Use Only

is one of the major forms of CAMKII. It has been found to play a critical role in sustaining activation of CAMKII at the postsynaptic density. Studies have found that knockout mice without CAMKIIA demonstrate a low frequency of LTP. Additionally, these mice do not form persistent, stable place cells in the hippocampus.