



## CaM kinase II Positive Control

Product Data Sheet

For Research Use Only, Not for use in diagnostic procedures

# CaM kinase II Positive Control

(Human, recombinant protein expressed in Sf9)  
Cat# CY-E1173

Lot No.  
For 200 Assays  
(0.003 units /  $\mu\text{L}$  x 1,000  $\mu\text{L}$ )

**100X Calmodulin (25  $\mu\text{g}/\text{mL}$  x 0.2 mL is Supplied with Enzyme)**

**Product Description:**

Active human CaM kinase II, residues 1-328, containing *N*-terminal GST tag and *C*-terminal His tag was produced by infection of *C*-terminal truncated CaM kinase II expressing recombinant baculovirus into sf9 cells. Purified by using GSH-Sepharose and Ni-NTA agarose chromatography. The CaM kinase II Positive Control is designed to use for CycLex CaM kinase II kinase Assay Kit (Cat# CY-1173). The CaM kinase II Positive Control should be added to the well at 15 m units/well. Unused CaM kinase II Positive control should be stored at  $-70^{\circ}\text{C}$ .

**Product Size:** Recombinant CaM kinase II: 3 units/1,000  $\mu\text{L}$

**Formulation:** The CaM kinase II Positive Control is supplied frozen in a buffer containing 20mM Hepes-KOH (pH 7.5), 1 % BSA, 1mM EDTA, 1 mM DTT, 50mM NaCl, 0.03 % Brij35 and 50% glycerol.

**Source:** Human CaM kinase II containing a *N*-terminal GST tag and *C*-terminal His tag, expressed in sf9 cells.

**Molecular Weight:** CaM kinase II Positive Control demonstrates a double 62 kDa bands by SDS-PAGE analysis.

**Purity:** CaM kinase II Positive Control is greater than 90 % pure as determined by SDS-PAGE analysis.

**Substrates:** CaM kinase II phosphorylates a number of substrates, including, and.

**Inhibitors:** Selective CaM kinase II inhibitor has not been discovered yet.

**Unit Definition:** One unit is defined as the amount of kinase required to incorporate 1nmol of phosphate into the syntide-2 per minute at  $30^{\circ}\text{C}$ .

**Assay Conditions:** Assay activity of CaM kinase II in a 50  $\mu\text{L}$  reaction containing 20 mM Hepes KOH (pH 7.5), 0.1 mM EGTA, 5 mM  $\text{MgCl}_2$ , 200 ng calmodulin, 2 mM  $\text{CaCl}_2$ , 1 mM DTT, 100  $\mu\text{M}$  [ $\gamma$   $^{32}\text{P}$ ] ATP (1  $\mu\text{Ci}$ ), and 4  $\mu\text{g}$  of syntide-2. Start the reaction by adding 10 $\mu\text{L}$  of the enzyme, diluted 5-fold in a buffer containing 20 mM Hepes KOH (pH 7.5), 1 mM DTT, 0.03 % Brij35. Incubate for 30 minutes at  $30^{\circ}\text{C}$ . Terminate the reaction by spotting to phosphocellulose P81 paper, and then wash 4 times with 75 mM  $\text{H}_3\text{PO}_4$  for 15 min and rinse P81 paper with ethanol. Dry filters and count in a liquid scintillation counter.



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**Storage and Stability:** Stable for 12 months at -70°C from date of shipment. For maximum recovery of product, centrifuge the original vial after thawing and prior to removing the cap. Aliquot enzyme to avoid repeated freezing and thawing.

**Related Products:**

- \* CaM kinase II kinase Assay Kit: Cat# CY-1173
- \* Phospho-syntide-2 monoclonal antibody: Cat# CY-M1023

**References:**

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