



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. 01E12
For 200 assays
(0.03 units / μL x 100 μL)

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. For instance, diluted positive control 1:20, use 10 μL for 1 assay. Unused CaM kinase II Positive control should be stored at -70°C .

Product Size: Recombinant CaM kinase II: 3 units/100 μL

Formulation: The CaM kinase II Positive Control is supplied frozen in a buffer containing 20mM Hepes-KOH (pH 7.5), 1 % BSA, 1mM EDTA, 2 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°C .

Assay Conditions: Assay activity of CaM kinase II in a 50 μL reaction containing 20 mM Hepes KOH (pH 7.5), 0.1 mM EGTA, 5 mM MgCl_2 , 200 ng calmodulin, 2 mM CaCl_2 , 1 mM DTT, 100 μM [γ - ^{32}P] ATP (1 μCi), and 4 μg of syntide-2. Start the reaction by adding 10 μL of the enzyme, diluted 50-fold in a buffer containing 20 mM Hepes KOH (pH 7.5), 1 mM DTT, 0.03 % Brij35. Incubate for 30 minutes at 30°C . Terminate the reaction by spotting to phosphocellulose P81 paper, and then wash 4 times with 75 mM H_3PO_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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