CK2 (alpha'/beta) Positive Control

(Human, full length, recombinant enzyme expressed in *E. coli.*)

Cat# CY-E1170-2

Lot No. 02B10
For 200 assays
(0.02units / µL x 200 µL)

Product Description: Human full length CK2-alpha' and -beta, containing a *C*-terminal His-tag, expressed in *E. coil*. Purified by Ni-NTA agarose chromatography. The CK2 (alpha'/beta) Positive control is designed to use for CycLex CK2 assay/Inhibitor Screening Kit [Cat# CY-1170]. The CK2 (alpha'/beta) Positive Control should be added to the well at 20 m units/well. For instance, dilute the Positive Control 1:10, use 10 µL for 1 assay. Unused CK2 (alpha'/beta) Positive Control should be stored at below -70°C.

Product Size: Full length CK2-alpha' and CK2-beta: 4 units/200 µL

Formulation: The CK2 (alpha'/beta) Positive Control is supplied frozen in a buffer containing 20mM HEPES-KOH (pH 7.5), 1 % BSA, 1 mM DTT, 50mM NaCl, 0.03 % Brij35 and 50 % glycerol.

Source: Human full length CK2 (alpha'/beta), containing *C*-terminal His-tag, expressed in *E. coil*.

Molecular Weight: CK2 (alpha'/beta) demonstrates a 43 kDa and 30 kDa bands respectively by SDS-PAGE analysis.

Purity: CK2 (alpha'/beta) is greater than 70 % pure as determined by SDS-PAGE analysis.

Substrates: CK2 (alpha'/beta) phosphorylates a numerous of substrates, including DNA topoisomerase I, human Cdc34 and p53

Inhibitors: Heparin and tetrabromobenzotriazole (TBB) are known as effective CK2 inhibitor.

Unit Definitions: One unit is defined as the amount of kinase required to incorporate 1 nmol of phosphate into the GST-p53, per minute at 30°C.

Assay Conditions: Assay activity of CK2 (alpha'/beta) in a 50 µL reaction containing 20 mM Hepes KOH (pH 7.5), 5 mM $MgCl_2$, 1 mM DTT, 50 µM [gamma ^{32}P] ATP (1 µCi), and 4 µg of GST-p53 fusion protein. Start the reaction by adding 10µL 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 adding 600 µL of cold 10 % TCA solution containing 0.2 % sodium pyrophosphate and stand on ice for 15 min. Filtrate acid insoluble material through GFC filters (Whattman Inc.), wash 4 times with 1 % TCA and rinse filters with ethanol. Dry filters and count in a liquid scintillation counter.

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:
* CK2 (alpha/beta) Positive Control: Cat# CY-E1170-1
* CK2 assay/Inhibitor Screening Kit: Cat# CY-1170

* Anti-phospho-p53 S46 (TK-4D4) monoclonal antibody: Cat# CY-M1022

General References:

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