CK2 (alpha/beta) Positive Control

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

Cat# CY-E1170-1

Lot No.
For 200 Assays
4 units (40 m units/µL)

Product Description: Human CK2-alpha and -beta, containing a C-terminal His tag, are expressed in *E. coil*. and purified by Ni-NTA agarose chromatography. The CK2 (alpha/beta) Positive Control is designed to use for CycLex CK2 Kinase Assay/Inhibitor Screening Kit **(**Cat# CY-1170). The CK2 (alpha/beta) Positive Control should be added to the well at 20 m units/well. Unused CK2 (alpha/beta) Positive Control should be stored at below -70°C.

Product Size: 4 units/100 µL

Formulation: Supplied frozen in a buffer containing 20 mM HEPES-KOH (pH 7.5), 1 % BSA, 2 mM DTT, 50 mM NaCl, 0.03 % Brij35 and 50 % glycerol.

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

Molecular Weight: 43 kDa and 30 kDa bands respectively by SDS-PAGE analysis.

Purity: > 65 % 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 (Whatman 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.

References:

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