



CK2 (alpha'/beta) Positive Control

Product Data Sheet

For Research Use Only, Not for use in diagnostic procedures

## CK2 (alpha'/beta) Positive Control

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

Cat# CY-E1170-2

Lot No.  
For 200 Assays  
(0.02units /  $\mu\text{L}$  x 200  $\mu\text{L}$ )

**Product Description:** Human full length CK2-alpha' and -beta, containing a C-terminal His-tag, expressed in *E. coli*. 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  $\mu\text{L}$  for 1 assay. Unused CK2 (alpha'/beta) Positive Control should be stored at below  $-70^{\circ}\text{C}$ .

**Product Size:** Full length CK2-alpha' and CK2-beta: 4 units/200  $\mu\text{L}$

**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. coli*.

**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  $30^{\circ}\text{C}$ .

**Assay Conditions:** Assay activity of CK2 (alpha'/beta) in a 50  $\mu\text{L}$  reaction containing 20 mM Hepes KOH (pH 7.5), 5 mM  $\text{MgCl}_2$ , 1 mM DTT, 50  $\mu\text{M}$  [ $\gamma$   $^{32}\text{P}$ ] ATP (1  $\mu\text{Ci}$ ), and 4  $\mu\text{g}$  of GST-p53 fusion protein. Start the reaction by adding 10 $\mu\text{L}$  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  $30^{\circ}\text{C}$ . Terminate the reaction by adding 600  $\mu\text{L}$  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  $-70^{\circ}\text{C}$  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



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

#### General References:

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