CREATIVE BIOMART®
Assay Kit

CK2 Kinase (Human) Assay/Inhibitor Screening Assay Kit

Product Information

Cat.No. Kit-0232

Product Overview

CK2 Kinase (Human) Assay/Inhibitor Screening Assay Kit is a single-site, non-quantitative immunoassay for CK2 activity. Plates are pre-coated with a substrate corresponding to recombinant p53, which contains a serine residue that are phosphorylated by CK2 (Casein kinase II). The detector antibody specifically detects only the phosphorylated form of serine46 on p53.

Description

Protein kinase Casein kinase II (CK2) is a ubiquitous and pleiotropic seryl/threonyl protein kinase, which appears to interact with different signaling pathways and therefore represents the prototype of a multifunctional protein kinase. The holoenzymeis generally composed of two catalytic (alpha and/or alpha") and two regulatory (beta) subunits, but the free alpha/alpha" subunit are catalytically active by themselves. Although the beta subunits deeply affect many properties of CK2, both the isolated catalytic subunit and holoenzyme are constitutively active. The enzyme is highly expressed in most cancers and this higher expression has been tentatively correlated with the involvement of CK2 in the promotion of specific phases of the cell cycle. Unlike the majority of protein kinases, which are tightly regulated enzymes, CK2 is endowed with high constitutive activity, a feature that is suspected to underlie its oncogenic potential and possible implication in viral infection. This makes CK2 an attractive target for anti-neoplastic and antiviral drugs.

Target Species

Human

Usage

For research use only (RUO)

Storage

Store the ATP at -20°C in aliquots. Store all other components at 4°C. Do not expose reagents to excessive light. Avoid freeze/thaw cycles.

Kit Components

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Microplate: One microplate supplied ready to use, with 96 wells (12 strips of 8-wells) in a foil, zip-lock bag with a desiccant pack. Wells are coated with recombinant p53 N-terminus (1-99a.a) as substrate of CK2.10X Wash Buffer: One bottle containing 100 mL of 10X buffer containing 2%Tween -20.Kinase Buffer: One bottle containing 20 mL of 1X buffer; used for Kinase Reaction Buffer and sample dilution.20X ATP: Lyophilized ATP Na2 salt. Reconstitute contents of vial with 0.8 mL of H2O. HRP conjugated Detection Antibody: One vial containing 12 mL of HRP (horseradish peroxidase) conjugated anti-phospho-p53 S46 (TK-4D4) antibody. Ready to use. Substrate Reagent: one bottle containing 20 mL of the chromogenic substrate, tetra-methylbenzidine (TMB). Ready to use.Stop Solution: One bottle containing 20 mL of 1 N H2SO4. Ready to use.

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