CREATIVE BIOMART®
Assay Kit

Protein Phosphatase Cdi1/KAP Fluorometric (Human) Assay Kit

Product Information

Cat.No. Kit-0736

Product Overview

Protein Phosphatase Cdi1/KAP Fluorometric (Human) Assay Kit is a fluorometric and non-radioactive assay designed to measure the activity of Cdi1/KAP protein phosphatase.

Description

A Cdk-interacting protein called Cdi1 (cyclin-dependent kinase interactor 1)/KAP (kinase associated phosphatase) was first identified as a novel G1- and S-phase dual-specificity phosphatase that associates with Cdk2 and/or Cdc2 by the interaction trap, a yeast genetic selection for interacting proteins. Using yeast two hybrid system, Cdi1/KAP interacts with cyclin-dependent kinases, including human Cdc2, Cdk2 and Cdk3, but not with Cdk4. In HeLa cells, Cdi1/KAP is expressed at the G1 to S transition, and the protein forms stable complexes with Cdk2. Further studies demonstrated that Cdi1/KAP binds to Cdk2 and dephosphorylates Thr160 when the associated cyclin subunit is degraded or dissociated. It means that Cdi1/KAP may inactivate a Cdk2 or Cdc2, by removing phosphates from the cyclin complexes, and this may contribute to cell cycle control. However, the physiological substrate(s) for tyrosine dephosphorylation of Cdi1/KAP has not yet been identified.

Applications

The Cdi1/KAP Fluorometric Assay Kit is a fluorometric and non-radioactive assay designed to measure the activity of Cdi1/KAP protein phosphatase. This 96-well assay is useful for screening inhibitors and modulators of Cdi1/KAP activity in HTS. The kit includes all necessary components, including recombinant, human Cdi1/KAP (full length), for use in preinvestigational drug discovery assays.

Target Species

Human

Usage

For research use only (RUO)

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Storage

Upon receipt, store all kit components at -20°C, except Recombinant Cdi1/KAP.Recombinant Cdi1/KAP should be stored at -70°C.Do not expose reagents to excessive light.

Kit Components

10X Assay Buffer 600 µL x 1 -20°C10X 3-o-methyl fluorescein phosphate (OMFP) 550 µL x 1 -20°CRecombinant Cdi1/KAP, Human (0.4 µg/µL) 550 µL x 1 -70°C100X Cdi1 Inhibitor : 100 µM Na3VO4 in H2O 100 µL x 1 -20°CStop Solution 300 µL x 1 -20°CInstruction Manual 1 Room temp.

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