CREATIVE BIOMART®
Assay Kit

Protein Phosphatase Cdc25A Fluorometric (Human) Assay Kit

Product Information

Cat.No. Kit-0733

Product Overview

Protein Phosphatase Cdc25A Fluorometric (Human) Assay Kit is a fluorometric and non-radioactive assay designed to measure the activity of Cdc25A protein phosphatase.

Description

Activation of cyclin-dependent kinases in higher eukaryotic cells can be achieved through dephosphorylation of two conserved residues, Thr14 and Tyr15 by members of the Cdc25 phosphatase family, Cdc25A, Cdc25B and Cdc25C. The Cdc25 dual-specificity phosphatases control progression through the eukaryotic cell division cycle by activating cyclin-dependent kinases. Cdc25A plays an important role at the G1/S-phase transition. Cdc25A degradation during mitotic exit and in early G1 is mediated by the anaphase-promoting complex or cyclosome (APC/C)(Cdh1) ligase, and that a KEN-box motif in the N-terminus of the protein is required for its targeted degradation. Cdc25B undergoes activation during S-phase and plays a role in activating the mitotic kinase Cdk1/cyclin B in the cytoplasm. Active Cdk1/cyclin B then phosphorylates and activates Cdc25C leading to a positive feedback mechanism and to entry into mitosis. In addition to their essential function in the normal cell cycle, cdc25 phosphatases are involved in the checkpoint-induced control of cell cycle progression. Finally, Cdc25A and B phosphatases have been shown to possess an important oncogenic potential and to be overexpressed in a variety of cancers and cancer cell lines.

Applications

The Protein Phosphatase Cdc25A Fluorometric Assay Kit is a fluorometric and non-radioactive assay designed to measure the activity of Cdc25A protein phosphatase. This 96-well assay is useful for screening inhibitors and modulators of Cdc25A activity in HTS. The kit includes all necessary components, including recombinant, human Cdc25A (catalytic domain), for use in preinvestigational drug discovery assays.

Target Species

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CREATIVE BIOMART®
Assay Kit

Protein Phosphatase Cdc25A Fluorometric (Human) Assay Kit

Human

Usage

For research use only (RUO)

Storage

Upon receipt, store all kit components at -20°C, except Recombinant Cdc25A.Recombinant Cdc25A 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 Cdc25A, Human (0.4 µg/µL) 550 µL x 1 -70°C100X Cdc25 Inhibitor : 100 µM Na3VO4 in DW 100 µL x 1 -20°CStop Solution 1,300 µL x 2 -20°CInstruction Manual 1 Room temp.

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