CREATIVE BIOMART®
Assay Kit

Mps1/TTK kinase (Human) Assay/Inhibitor Screening Assay Kit

Product Information

Cat.No. Kit-0608

Product Overview

Mps1/TTK kinase (Human) Assay/Inhibitor Screening Assay Kit is a single-site, non-quantitative immunoassay for human Mps1/TTK activity. Plates are pre-coated with a substrate corresponding to recombinant human Mps1-substrate, which contains a serine residue that is phosphorylated by human Mps1/TTK. The detector antibody specifically detects only the phosphorylated form of serine residue on human Mps1/TTK-substrate.

Description

The human Mps1/TTK kinase was originally identified in a screen for novel tyrosine kinases by using a phosphotyrosine antibody to screen a T-cell cDNA expression library. Using a similar strategy, the mouse homologue, esk, was also cloned from an embryonal carcinoma cell line. It was determined subsequently that esk was the mouse orthologue of yeast MPS1. Human Mps1 is detectable in all proliferating human cells and tissues.Expression of the human Mps1 gene is markedly reduced or absent in resting cells and in tissues with a low proliferative index. Levels of human Mps1 mRNA and protein are very low in starved cells. When cells are induced to enter the cell cycle, levels of human Mps1 mRNA, protein and kinase activity increase at the G1/S phase of the cell cycle and peak in G2/M.Human Mps1 mRNA levels, as well as kinase activity, drop sharply in early G1, whereas protein levels are largely maintained. Human Mps1 may play a role in cell cycle control.

Applications

1) Screening inhibitors or activators of human Mps1/TTK.2) Detecting the effects of pharmacological agents on human Mps1/TTK activity.

Target Species

Human

Usage

For research use only (RUO)

Storage

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• Upon receipt store all other components at 4°C.• Do not expose reagents to excessive light

Kit Components

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 human Mps1-substrate as a substrate.10X Wash Buffer: One 100 mL bottle 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-serine monoclonal antibody (TK-21B). Ready to use.Substrate Reagent: 20 mL of the chromogenic substrate, tetra-methylbenzidine (TMB). Ready to use.Stop Solution: One bottle supplied ready to use, containing 20 mL of 1 N H2SO4 Ready to use.

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