CREATIVE BIOMART®
Assay Kit

Aurora Family Kinase (Human) Assay/Inhibitor Screening Kit

Product Information

Cat.No. Kit-0122

Product Overview

Aurora Family Kinase (Human) Assay/Inhibitor Screening Kit is a single-site, non-quantitative immunoassay for Aurora A, B and C kinase activity. Plates are pre-coated with a recombinant "Aurora-substrate-1" which contains a serine residue that is phosphorylated by Aurora A, B and C kinase. The detector antibody specifically detects only the phosphorylated form of "Aurora-substrate-1".

Description

Aurora kinases representing a novel family of serine/threonine kinases have been identified as key regulators of the mitotic cell division process. Aurora kinases are evolutionarily conserved enzymes that regulate different aspects of cell division. Only a single Aurora kinase is present in Saccharomyces cerevisiae (Ipl1) and Schizosaccharomyces pombe (Ark1p). In contrast, three distinct Aurora family members, termed Aurora A, B, and C, have been described in metazoan organisms. A-type Aurora kinases localize to both centrosomes and spindle microtubules and have been implicated in spindle assembly. The B-type Aurora kinases are present at centromeres in prophase and metaphase, before they relocalize to the central spindle and the midbody in anaphase and telophase. The C-type Aurora kinases have so far been identified only in mammals. They are expressed primarily in testis and some tumor cell lines, where they have been localized to spindle poles. All three members of the mammalian kinase family have a catalytic domain that is highly conserved with a short C-terminal domain and an N-terminal domain of varying sizes.

Applications

1) Screening inhibitors or activators of Aurora A, B and C kinase.2) Detecting the effects of pharmacological agents on Aurora A, B and C kinase activity.

Target Species

Human

Usage

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For research use only (RUO)

Storage

• Upon receipt store the ATP at -20°C• 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 "Aurora-substrate-1" as substrate of Aurora A, B and C kinase.10X Wash Buffer: One 100 mL bottle of 10X buffer containing 2%Tween -20Kinase 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. Mix gently until dissolved. Final concentration of ATP should be 1.25 mM ATP. The ATP solution can be stored in small aliquots (e.g. 100 µL) at -20°C. The 1.25 mM ATP stock solution must be diluted to 62.5 µM in Kinase Reaction Buffer at the time of the assay.HRP conjugated Detection Antibody: One vial containing 12 mL of HRP (horseradish peroxidase) conjugated anti-phospho-Aurora-substrate-1 (AK-C17) antibody. Ready to use.Substrate Reagent: 12 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.

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