CREATIVE BIOMART®
Assay Kit

Aurora A Kinase (Human) Assay/Inhibitor Screening Kit

Product Information

Cat.No. Kit-0121

Product Overview

Aurora A Kinase (Human) Assay/Inhibitor Screening Kit is a single-site, non-quantitative immunoassay for Aurora-A activity. Plates are pre-coated with a substrate corresponding to recombinant Lats2, which contains serine83 residues that can be phosphorylated by Aurora-A. The detector antibody specifically detects only the phosphorylated form of serine83 residue on Lats2.

Description

Aurora-A is a key member of a closely related subgroup of serine/threonine kinases that belongs to the Drosophila aurora and Saccharomyces cerevisiae Ipl1 kinase family, and both are essential for chromosome segregation and centrosome functions. Aurora-A kinase has been shown to contribute to oncogenic transformation and is frequently overexpressed and amplified in many human tumor types. It has been reported that amplification of Aurora-A in approximately 12% of primary breast tumors, as well as in breast, ovarian, colon, prostate, neuroblastoma, and cervical cancer cell lines. Additionally, high expression of Aurora-A mRNA was detected in tumor cell lines without evidence of gene amplification. Ectopic expression of Aurora-A in mouse NIH 3T3 cells led to the appearance of abnormal centrosome number (amplification) and transformation in vitro. Finally, overexpression of Aurora-A in near-diploid human breast epithelial cells revealed similar centrosome abnormality, as well as induction of aneuploidy. These findings suggested that Aurora-A is a critical kinase-encoding gene, whose overexpression leads to centrosome amplification, chromosomal instability, and transformation in mammalian cells.

Applications

1) Screening inhibitors or activators of Aurora-A.2) Detecting the effects of pharmacological agents on Aurora-A activity.

Target Species

Human

Usage

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For research use only (RUO)

Storage

Upon receipt store the ATP at -20°CUpon 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 Lats2-N-ter as an Aurora-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 2 mL of H2O. Mix gently until dissolved. Final concentration of ATP should be 1 mM ATP. The ATP solution can be stored in small aliquots (e.g. 100 µL) at -20°C. The 1 mM ATP stock solution must be diluted to 50 µM in Kinase Reaction Buffer at the time of the assay.Anti-Phospho-Lats2-S83 Monoclonal Antibody (ST-3B11): One vial containing 12 mL of anti-phospho- Lats2-S83 monoclonal antibody (ST-3B11). Ready to use. HRP conjugated Anti-mouse IgG: One vial containing 12 mL of HRP (horseradish peroxidase) conjugated anti-mouse IgG. 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.

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