CREATIVE BIOMART®
Assay Kit

Pim-1 Kinase (Human) Assay/Inhibitor Screening Assay Kit

Product Information

Cat.No. Kit-0691

Product Overview

Pim-1 Kinase (Human) Assay/Inhibitor Screening Assay Kit is a single-site, non-quantitative immunoassay for Pim-1 activity. Plates are pre-coated with a substrate corresponding to recombinant p21waf1, which contains threonine residues that can be efficiently phosphorylated by Pim-1. The detector antibody specifically detects only the phosphorylated form of threonine145 residue on p21waf1.

Description

The pim-1 oncogene encodes a serine/threonine kinase (Pim-1) involved in the transduction of cytokine triggered mitogenic signals. The pim-1 oncogene was originally identified as a genetic locus frequently activated by the proviral insertion of Moloney murine leukemia virus into mouse T cell lymphomas. The pim-1 oncogene has also been implicated in human hematopoietic malignancies, with its overexpression frequently detected in human hematopoietic cell lines as well as in fresh tumor cells from patients with leukemia. During embryonal development, the pim-1 gene is expressed mainly in developing fetal hematopoietic tissues. The pim-1 gene product (Pim-1), identified as a serine/threonine kinase, has been thought to play a critical role in the transduction of mitogenic signals from cytokines since Pim-1 expression is rapidly induced after cytokine stimulation, and the proliferative response to cytokines is impaired in cells from pim-1-deficient mice. When overexpressed, pim genes can efficiently cooperate with myc or bcl-2 oncogenes in lymphomagenesis. Pim-1 has been reported to protect thymocytes against glucocorticoid- induced apoptosis and to promote cell proliferation or survival in several IL-3- or IL-6-dependent hematopoietic cell lines.

Applications

1) Screening inhibitors or activators of Pim-1.2) Detecting the effects of pharmacological agents on Pim-1 activity.

Target Species

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Human

Usage

For research use only (RUO)

Storage

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 p21waf1 as Pim-1 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.Anti-phospho-p21waf1 threonine145 polyclonal antibody (PWT-01): One vial containing 12 mL of anti-phospho-p21waf1 threonine145 polyclonal antibody (PWT-01). Ready to use.HRP conjugated anti-rabbit IgG: One vial containing 12 mL of HRP (horseradish peroxidase) conjugated anti-rabbit 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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