CREATIVE BIOMART®
Assay Kit

Pyk2 Kinase (Human) Assay/Inhibitor Screening Assay Kit

Product Information

Cat.No. Kit-0754

Product Overview

Pyk2 Kinase (Human) Assay/Inhibitor Screening Assay Kit is a single-site, non-quantitative immunoassay for kinase activity of recombinant catalytic domain of Met. Plates are pre-coated with a newly designed "Tyrosine kinase-substrate-1", which can be easily phosphorylated by recombinant catalytic domain of Met. The detector antibody is PY-39, an antibody that specifically detects the phosphotyrosine residue on "Tyrosine kinase-substrate-1".

Description

Intracellular signal transduction following extracellular ligation by a wide variety of surface molecules involves the activation and tyrosine phosphorylation of protein tyrosine kinases (PTKs). Tyrosine phosphorylation, controlled by the coordinated actions of protein tyrosine phosphatases and tyrosine kinases, is a critical regulatory mechanism for various physiological processes, including cell growth, differentiation, metabolism, cell cycle regulation and cytoskeleton function.The focal adhesion PTK family consists of the focal adhesion kinase (FAK) and the Pyk2 kinase (also known as RAFTK, CAK-beta and CADTK). Pyk2 kinase can be activated in response to various stimuli, such as TNF-alpha, changes in osmolarity, elevation in intracellular calcium concentration, lysophosphatidic acid, in addition of bradykinin, a neuropeptide hormone that binds to a G protein-coupled receptor and in turn stimulates phosphatidylinositol hydrolysis. Pyk2 kinase is expressed mainly in the central nervous system and in cells derived from hematopoietic lineages (1-3), while FAK is widely expressed in various tissues and links transmembrane integrin receptors to intracellular pathways.

Applications

1) Screening inhibitors or activators of recombinant catalytic domain of Pyk2.2) Detecting the effects of pharmacological agents on recombinant catalytic domain of Pyk2.

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 "Tyrosine kinase-substrate-1".10X Wash Buffer: One 100 mL bottle of 10X buffer containing 2%Tween -20.Kinase Buffer: One 20 mL bottle of 1X buffer used for Kinase Reaction Buffer and sample dilution.20X ATP: Lyophilized ATP Na2 salt. Reconstitute contents of vial with 1.6 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 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 bottle containing 12 mL of HRP (horseradish peroxidase) conjugated anti-phosphotyrosine monoclonal antibody (PY-39). Ready to use.Substrate Reagent: One bottle containing 12 mL of the chromogenic substrate, tetra-methylbenzidine (TMB). Ready to use.Stop Solution: One bottle supplied ready to use, containing 12 mL of 1.25 N H2SO4. Ready to use.

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