CREATIVE BIOMART®
Assay Kit

TrkA Kinase (Human) Assay/Inhibitor Screening Kit

Product Information

Cat.No. Kit-0830

Product Overview

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

Description

The Trk (tropomyosin receptor kinase) receptors belong to the family of receptor tyrosine kinases, and three trk genes have been identified in mammals. The TrkA protooncogene was first identified as an nerve growth factor receptor (NGFR), followed by TrkB and TrkC. Nerve growth factor (NGF) is the preferred ligand for TrkA, brain-derived neurotrophic factor (BDNF) and Neurotrophin-4/5 (NT-4/5) are preferred for TrkB, and Neurotrophin-3 (NT-3) for TrkC. These specificities are not absolute, and NT-3 is also a ligand for TrkA and TrkB. These Trk receptors are transmembrane glycoproteins of ~140 kD.They are tyrosine kinases with an extracellular ligand-binding domain containing multiple repeats of leucine-rich motifs, two cysteine clusters (C1, C2), two immunoglobulin-like domains (Ig1, Ig2), and a single transmembrane domain. The tyrosine kinase domains are highly related (~80% amino acid identity), however the extracellular domains are more divergent (~30%).

Applications

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

Target Species

Human

Usage

For research use only (RUO)

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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).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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