abcam

Product datasheet

Recombinant human PYK2 protein ab42622

Description

Product name	Recombinant human PYK2 protein
Biological activity	Specific Activity : 20 U/mg. One unit defined as the amount of enzyme that will transfer 1nmol phosphate to Tyr substrate per minute at pH 7.4 and 30deg.C. Assay buffer : 50mM HEPES pH 7.4, 3mM $MgCl_2$, 3mM $MnCl_2$, 1mM DTT, 3um Na-orthovanadate, 0.1M ATP, 30ug/ml Poly (Glu:Tyr) 4:1 substrate and 4ug/ml recombinant PYK2.
Purity	> 90 % SDS-PAGE. Affinity purified.
Expression system	Baculovirus infected Sf9 cells
Protein length	Full length protein
Animal free	No
Nature	Recombinant
Species	Human
Predicted molecular weight	120 kDa including tags
Tags	His tag N-Terminus

Specifications

Our **Abpromise guarantee** covers the use of **ab42622** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Applications	Inhibition Assay SDS-PAGE
Form	Liquid
Additional notes	Source : Baculovirus infected Sf9 cells

Preparation and Storage

Stability and Storage	Shipped on Dry Ice. Upon delivery aliquot. Store at -80°C. Avoid freeze / thaw cycle. pH: 8.00 Constituents: 0.0462% (R*,R*)-1,4-Dimercaptobutan-2,3-diol, 0.395% Tris HCl, 0.05% Tween, 50% Glycerol (glycerin, glycerine), 0.58% Sodium chloride This product is an active protein and may elicit a biological response in vivo, handle with caution.

General Info

Function	Involved in calcium induced regulation of ion channel and activation of the map kinase signaling pathway. May represent an important signaling intermediate between neuropeptide activated receptors or neurotransmitters that increase calcium flux and the downstream signals that regulate neuronal activity. Interacts with the SH2 domain of Grb2. May phosphorylate the voltage-gated potassium channel protein Kv1.2. Its activation is highly correlated with the stimulation of c-Jun N-terminal kinase activity. Involved in osmotic stress-dependent SNCA 'Tyr-125' phosphorylation. In concert with SRC, plays an important role in osteoclastic bone resorption. Both the formation of a SRC-PTK2B complex, and SRC kinase activity are necessary for this function. The Tyr-402 phosphorylated form serves as a docking site for SRC and is important for the organization of the osteoclast actin cytoskeleton and attachment sites and for bone resorption.
Tissue specificity	Most abundant in the brain, with highest levels in amygdala and hippocampus. Low levels in kidney. Also expressed in spleen and lymphocytes.
Sequence similarities	Belongs to the protein kinase superfamily. Tyr protein kinase family. FAK subfamily. Contains 1 FERM domain. Contains 1 protein kinase domain.
Post-translational modifications	Phosphorylated on tyrosine residues in response to various stimuli that elevate the intracellular calcium concentration, as well as by PKC activation. Recruitment by nephrocystin to cell matrix adhesions initiates Tyr-402 phosphorylation. In monocytes, adherence to substrata is required for tyrosine phosphorylation and kinase activation. Angiotensin II, thapsigargin and L-alpha-lysophosphatidic acid (LPA) also induce autophosphorylation and increase kinase activity.
Cellular localization	Cytoplasm. Cell membrane. Interaction with nephrocystin induces the membrane-association of the kinase.

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