



PYK2 Rabbit mAb

Catalog No	YP-rAb-17531
Isotype	IgG
Reactivity	Human,Mouse,Rat
Applications	WB,IHC,IF,ELISA
Gene Name	PTK2B
Protein Name	Protein-tyrosine kinase 2-beta
Purification Process	Protein A
Specificity	Endogenous
Formulation	PBS, 50% glycerol, 0.05% Proclin 300, 0.05%BSA
Source	Monoclonal, Rabbit,IgG
Dilution	IHC 1:1000-1:4000; WB 1:2000-1:10000; IF 1:200-1:1000; ELISA 1:5000-1:20000; Note: For IHC, we suggest antigen retrieval with TE buffer pH 9.0
Concentration	0.5 mg/ml
Purity	≥90%
Storage Stability	-15° C to -25° C/1 year(Do not lower than -25° C)
Synonyms	PTK2B ; FAK2 ; PYK2 ; RAFTK ; Protein-tyrosine kinase 2-beta ; Calcium-dependent tyrosine kinase ; CADTK ; Calcium-regulated non-receptor proline-rich tyrosine kinase ; Cell adhesion kinase beta ; CAK-beta ; CAKB ; Focal adhesion kinase 2 ; FADK 2 ; Pro
Observed Band	116kD
Calculated Molecular Weight	116kD
Cell Pathway	Cytoplasm. Cytoplasm, perinuclear region. Cell membrane; Peripheral membrane protein; Cytoplasmic side. Cell junction, focal adhesion. Cell projection, lamellipodium. Cytoplasm, cell cortex. Nucleus. Interaction with NPHP1 induces the membrane-association of the kinase. Colocalizes with integrins at the cell periphery.
Tissue Specificity	Most abundant in the brain, with highest levels in amygdala and hippocampus. Low levels in kidney (at protein level). Also expressed in spleen and lymphocytes.
Function	Catalytic activity:ATP + a [protein]-L-tyrosine = ADP + a [protein]-L-tyrosine phosphate.,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. PTM: 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. similarity: Belongs to the protein kinase superfamily. Tyr protein kinase family. similarity: Belongs to the protein kinase superfamily. Tyr protein kinase family. FAK subfamily. similarity: Contains 1 FERM domain. similarity: Contains 1 protein kinase domain. subcellular location: Interaction with nephrocystin induces the membrane-association of the kinase. subunit: Interacts with Crk-associated substrate (Cas), PTPNS1 and SH2D3C (By similarity). Interacts with nephrocystin, ASAP2, OPHN1L, SKAP2 and TGFB1I1. tissue specificity: Most abundant in the brain, with highest levels in amygdala and hippocampus. Low levels in kidney. Also expressed in spleen and lymphocytes.

Background

This gene encodes a cytoplasmic protein tyrosine kinase which is involved in calcium-induced regulation of ion channels and activation of the map kinase signaling pathway. The encoded protein may represent an important signaling intermediate between neuropeptide-activated receptors or neurotransmitters that increase calcium flux and the downstream signals that regulate neuronal activity. The encoded protein undergoes rapid tyrosine phosphorylation and activation in response to increases in the intracellular calcium concentration, nicotinic acetylcholine receptor activation, membrane depolarization, or protein kinase C activation. This protein has been shown to bind CRK-associated substrate, nephrocystin, GTPase regulator associated with FAK, and the SH2 domain of GRB2. The encoded protein is a member of the FAK subfamily of protein tyrosine kinases but lacks significant sequence similarity t

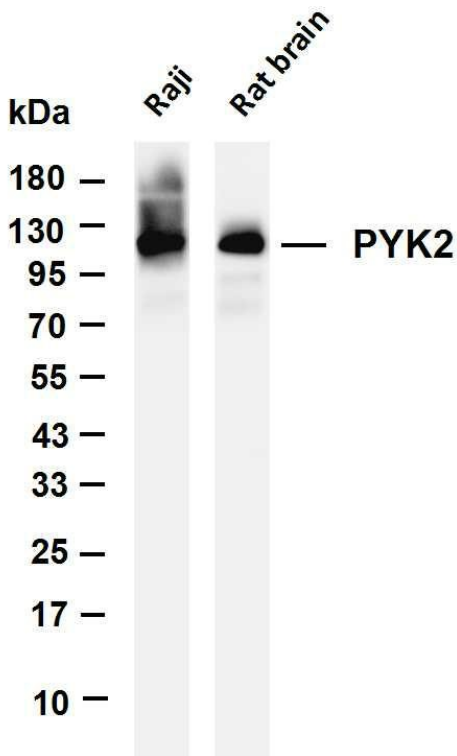
matters needing attention

Avoid repeated freezing and thawing!

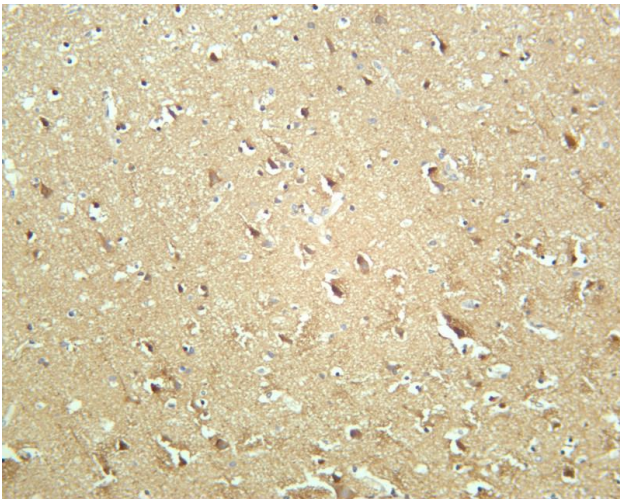
Usage suggestions

This product can be used in immunological reaction related experiments. For more information, please consult technical personnel.

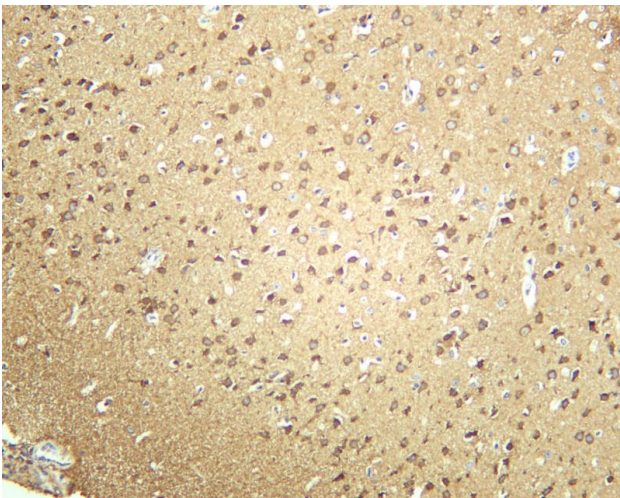




Various whole cell lysates were separated by 4-20% SDS-PAGE, and the membrane was blotted with anti-PYK2 antibody. The HRP-conjugated Goat anti-Rabbit IgG(H + L) antibody was used to detect the antibody. Lane 1: Raji Lane 2: Rat brain Predicted band size: 116kDa Observed band size: 116kDa

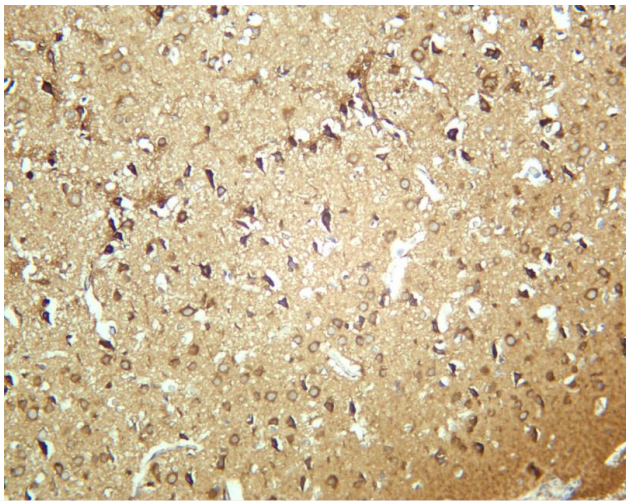


Human brain was stained with anti-PYK2 rabbit antibody

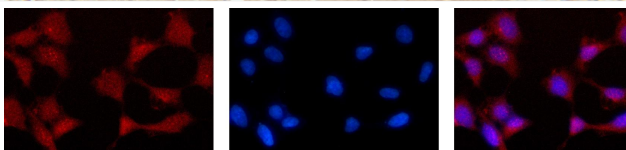


Mouse brain was stained with anti-PYK2 rabbit antibody





Rat brain was stained with anti-PYK2 rabbit antibody



Immunofluorescence analysis of HEK293. Picture A: PYK2 antibody (red). Picture B: DAPI (blue). Picture C: Merge of A+B

A

B

C

