10320 Camino Santa Fe, Suite G
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Tel: 858.875.1900 Fax: 858.875.1999

# PTK2B Antibody (C-term)

**Purified Rabbit Polyclonal Antibody (Pab)**
**Catalog # AP20681c**

## Specification

### PTK2B Antibody (C-term) - Product Information

| | |
|---|---|
| Application | **IF, IHC-P, WB,E** |
| Primary Accession | Q14289 |
| Reactivity | **Human** |
| Host | **Rabbit** |
| Clonality | **Polyclonal** |
| Isotype | **Rabbit IgG** |
| Calculated MW | **115875** |

### PTK2B Antibody (C-term) - Additional Information

**Gene ID** 2185

**Other Names**
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, Proline-rich tyrosine kinase 2, Related adhesion focal tyrosine kinase, RAFTK, PTK2B, FAK2, PYK2, RAFTK

**Target/Specificity**
This PTK2B antibody is generated from a rabbit immunized with a KLH conjugated synthetic peptide between 805-838 amino acids from the C-terminal region of human PTK2B.

**Dilution**
IF~~1:25
IHC-P~~1:25
WB~~1:1000
E~~Use at an assay dependent concentration.

**Format**
Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

**Storage**
Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions**
PTK2B Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

### PTK2B Antibody (C-term) - Protein Information

**Name** PTK2B

**Synonyms** FAK2, PYK2, RAFTK

**Function** Non-receptor protein-tyrosine kinase that regulates reorganization of the actin cytoskeleton, cell polarization, cell migration, adhesion, spreading and bone remodeling. Plays a role in the regulation of the humoral immune response, and is required for normal levels of marginal B-cells in the spleen and normal migration of splenic B-cells. Required for normal macrophage polarization and migration towards sites of inflammation. Regulates cytoskeleton rearrangement and cell spreading in T-cells, and contributes to the regulation of T-cell responses. Promotes osteoclastic bone resorption; this requires both PTK2B/PYK2 and SRC. May inhibit differentiation and activity of osteoprogenitor cells. Functions in signaling downstream of integrin and collagen receptors, immune receptors, G-protein coupled receptors (GPCR), cytokine, chemokine and growth factor receptors, and mediates responses to cellular stress. Forms multisubunit signaling complexes with SRC and SRC family members upon activation; this leads to the phosphorylation of additional tyrosine residues, creating binding sites for scaffold proteins, effectors and substrates. Regulates numerous signaling pathways. Promotes activation of phosphatidylinositol 3-kinase and of the AKT1 signaling cascade. Promotes activation of NOS3. Regulates production of the cellular messenger cGMP. Promotes activation of the MAP kinase signaling cascade, including activation of MAPK1/ERK2, MAPK3/ERK1 and MAPK8/JNK1. Promotes activation of Rho family GTPases, such as RHOA and RAC1. Recruits the ubiquitin ligase MDM2 to P53/TP53 in the nucleus, and thereby regulates P53/TP53 activity, P53/TP53 ubiquitination and proteasomal degradation. Acts as a scaffold, binding to both PDPK1 and SRC, thereby allowing SRC to phosphorylate PDPK1 at 'Tyr-9, 'Tyr-373', and 'Tyr-376'. Promotes phosphorylation of NMDA receptors by SRC family members, and thereby contributes to the regulation of NMDA receptor ion channel activity and intracellular Ca(2+) levels. May also regulate potassium ion transport by phosphorylation of potassium channel subunits. Phosphorylates SRC; this increases SRC kinase activity. Phosphorylates ASAP1, NPHP1, KCNA2 and SHC1. Promotes phosphorylation of ASAP2, RHOU and PXN; this requires both SRC and PTK2/PYK2.

**Cellular Location**
Cytoplasm. Cytoplasm, perinuclear region. Cell membrane; Peripheral membrane protein; Cytoplasmic side. Cell junction, focal adhesion. Cell projection, lamellipodium. Cytoplasm, cell cortex Nucleus. Note=Interaction with NPHP1 induces the membrane-association of the kinase. Colocalizes with integrins at the cell periphery

**Tissue Location**
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.

## PTK2B Antibody (C-term) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

## PTK2B Antibody (C-term) - Images

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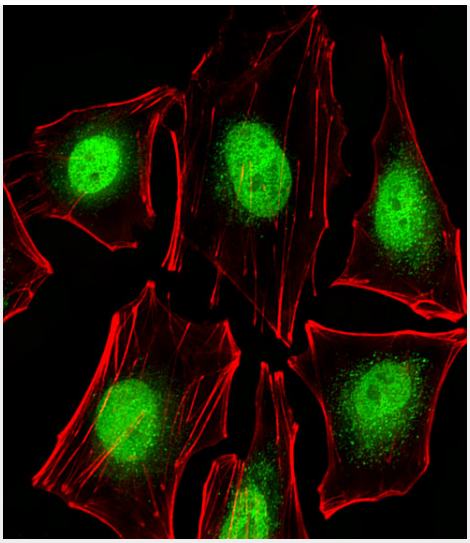
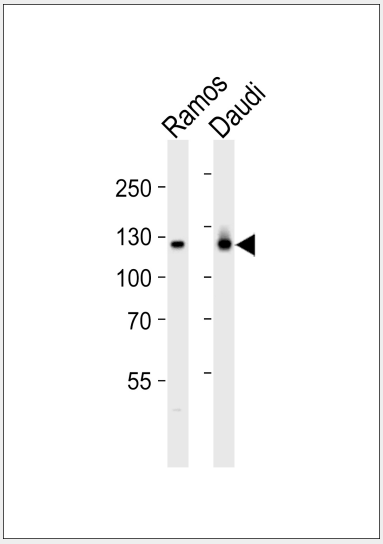


Fluorescent image of A549 cells stained with PTK2B Antibody (C-term)(Cat#AP20681c). AP20681c was diluted at 1:25 dilution. An Alexa Fluor 488-conjugated goat anti-rabbit lgG at 1:400 dilution was used as the secondary antibody (green). Cytoplasmic actin was counterstained with Alexa Fluor® 555 conjugated with Phalloidin (red).




Western blot analysis of lysates from Ramos, Daudi cell line (from left to right), using PTK2B Antibody (C-term)(Cat. #AP20681c). AP20681c was diluted at 1:1000 at each lane. A goat anti-rabbit IgG H&L(HRP) at 1:5000 dilution was used as the secondary antibody. Lysates at 35ug per lane.

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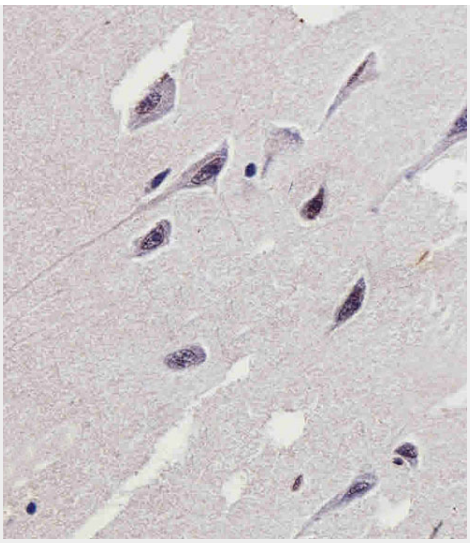

Immunohistochemical analysis of paraffin-embedded H. brain section using PTK2B Antibody (C-term)(Cat#AP20681c). AP20681c was diluted at 1:25 dilution. A peroxidase-conjugated goat anti-rabbit IgG at 1:400 dilution was used as the secondary antibody, followed by DAB staining.

**PTK2B Antibody (C-term) - Background**

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**PTK2B Antibody (C-term) - References**

Lev S.,et al.Nature 376:737-745(1995).
Herzog H.,et al.Genomics 32:484-486(1996).
Sasaki H.,et al.J. Biol. Chem. 270:21206-21219(1995).
Avraham S.,et al.J. Biol. Chem. 270:27742-27751(1995).
Li X.,et al.J. Biol. Chem. 273:9361-9364(1998).