

Datasheet for ABIN7180078  
**anti-PTK2B antibody (Tyr579)**



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2 Images

### Overview

Quantity:	100 µL
Target:	PTK2B
Binding Specificity:	Tyr579
Reactivity:	Human
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This PTK2B antibody is un-conjugated
Application:	Western Blotting (WB), ELISA

### Product Details

Immunogen:	Synthesized non-phosphopeptide derived from Human PYK2 around the phosphorylation site of tyrosine 579 (E-D-Y(p)-Y-K).
Isotype:	IgG
Cross-Reactivity:	Human, Mouse
Purification:	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.

### Target Details

Target:	PTK2B
Alternative Name:	PTK2B ( <a href="#">PTK2B Products</a> )

## Target Details

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### Background:

Background: 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<sup>2+</sup> 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.

Lev S., Nature 376:737-745(1995).

Herzog H., Genomics 32:484-486(1996).

Sasaki H., J. Biol. Chem. 270:21206-21219(1995).

Aliases: CADTK antibody, CAK-beta antibody, CAKB antibody, CAKbeta antibody, Calcium regulated non receptor proline rich tyrosine kinase antibody, Calcium-dependent tyrosine kinase antibody, Cell adhesion kinase beta antibody, E430023005Rik antibody, EC 2.7.10.2 antibody, FADK 2 antibody, FADK2 antibody, FAK2 antibody, FAK2\_HUMAN antibody, Focal adhesion kinase 2 antibody, MGC124628 antibody, PKB antibody, Proline-rich tyrosine kinase 2 antibody,

## Target Details

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Protein kinase B antibody, Protein Tyrosine Kinase 2 Beta antibody, Protein-tyrosine kinase 2-beta antibody, PTK antibody, PTK2B antibody, PTK2B protein tyrosine kinase 2 beta antibody, PYK2 antibody, RAFTK antibody, RAFTK2 antibody, Related adhesion focal tyrosine kinase antibody

UniProt: [Q14289](#)

Pathways: [EGFR Signaling Pathway](#), [Regulation of Actin Filament Polymerization](#), [Carbohydrate Homeostasis](#), [Glycosaminoglycan Metabolic Process](#), [Cellular Glucan Metabolic Process](#), [Cell-Cell Junction Organization](#), [Regulation of Cell Size](#), [Regulation of Carbohydrate Metabolic Process](#), [Hepatitis C](#), [Protein targeting to Nucleus](#), [CXCR4-mediated Signaling Events](#), [Signaling Events mediated by VEGFR1 and VEGFR2](#), [Signaling of Hepatocyte Growth Factor Receptor](#), [Positive Regulation of fat Cell Differentiation](#), [VEGF Signaling](#)

## Application Details

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Application Notes: WB:1:500-1:3000,

Restrictions: For Research Use only

## Handling

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Format: Liquid

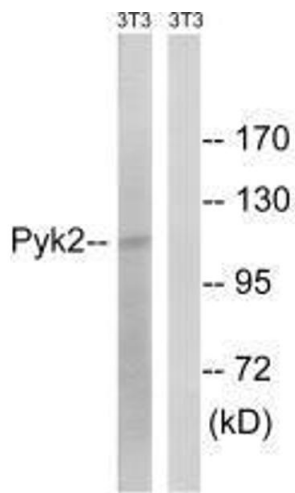
Buffer: Rabbit IgG in phosphate buffered saline (without Mg<sup>2+</sup> and Ca<sup>2+</sup>), pH 7.4, 150 mM NaCl, 0.02 % sodium azide and 50 % glycerol.

Preservative: Sodium azide

Precaution of Use: This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.

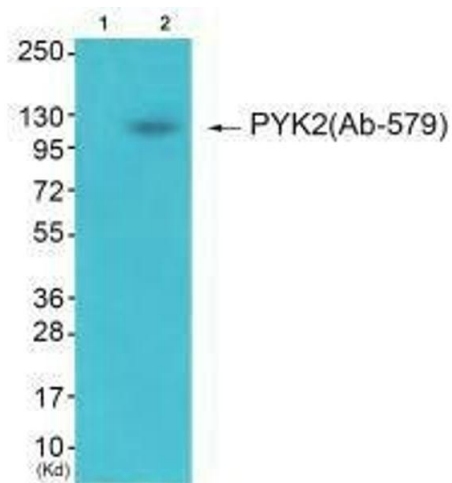
Storage: -20 °C,-80 °C

Storage Comment: Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.



#### Western Blotting

**Image 1.** Western blot analysis of extracts from 3T3 cells, using PYK2 (Ab-579) antibody.



#### Western Blotting

**Image 2.** Western blot analysis of extracts from 3T3 cells (Lane 2), using PYK2 (Ab-579) antibody. The lane on the left is treated with synthesized peptide.