10320 Camino Santa Fe, Suite G
San Diego, CA 92121
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PTK2B / PYK2 Antibody
Rabbit Polyclonal Antibody
Catalog # ALS15220

Specification

PTK2B / PYK2 Antibody - Product Information

Application	**WB, IHC**
Primary Accession	Q14289
Reactivity	**Human, Mouse, Rat**
Host	**Rabbit**
Clonality	**Polyclonal**
Calculated MW	**116kDa KDa**

PTK2B / PYK2 Antibody - Additional Information

Gene ID 2185

Other Names
Protein-tyrosine kinase 2-beta, 2.7.10.2, 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

Reconstitution & Storage
Long term: -20°C; Short term: -20°C

Precautions
PTK2B / PYK2 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

PTK2B / PYK2 Antibody - 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.

Volume
1 ea

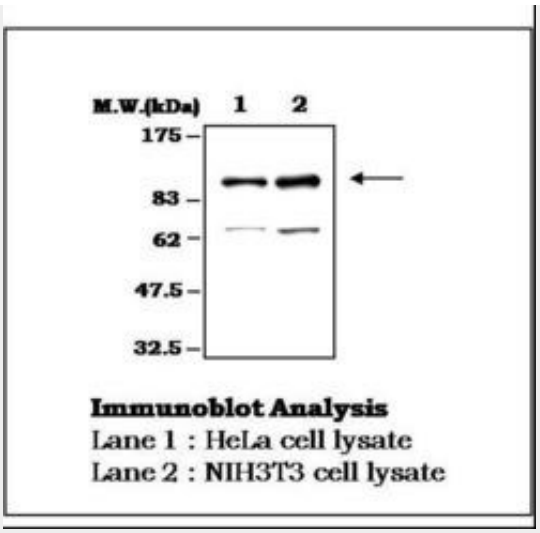
PTK2B / PYK2 Antibody - Protocols

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

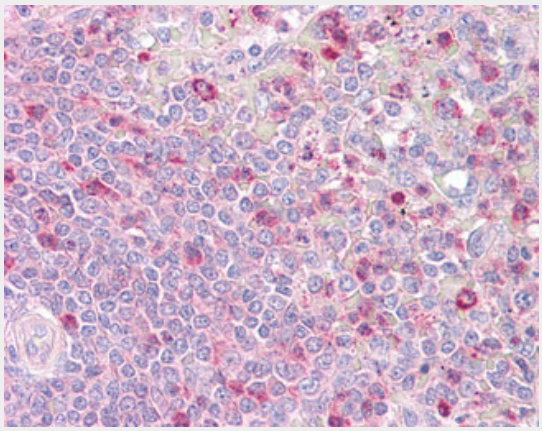
- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

PTK2B / PYK2 Antibody - Images

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Anti-PTK2B antibody IHC of human spleen.

PTK2B / PYK2 Antibody - Background

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PTK2B / PYK2 Antibody - References

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