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Mouse Ptk2b Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab)

Catalog # AP14279C

Specification

Mouse Ptk2b Antibody (Center) - Product Information

Application	**WB, IHC-P,E**
Primary Accession	Q9QVP9
Reactivity	**Human, Mouse**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Calculated MW	**115794**
Antigen Region	**672-701**

Mouse Ptk2b Antibody (Center) - Additional Information

Gene ID 19229

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 Mouse Ptk2b antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 672-701 amino acids from the Central region of mouse Ptk2b.

Dilution
WB~~1:1000
IHC-P~~1:10~50

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
Mouse Ptk2b Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Mouse Ptk2b Antibody (Center) - 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' (By similarity). 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 (By similarity).

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=Colocalizes with integrins at the cell periphery (By similarity). Interaction with NPHP1 induces the membrane- association of the kinase. Colocalizes with PXN at the microtubule- organizing center. The tyrosine phosphorylated form is detected at cell-cell contacts.

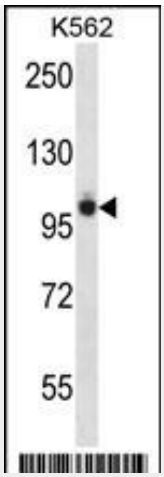
Mouse Ptk2b Antibody (Center) - Protocols

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

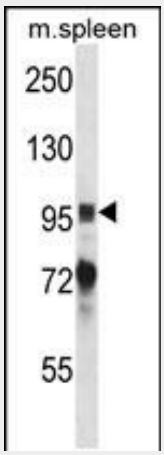
- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Mouse Ptk2b Antibody (Center) - Images

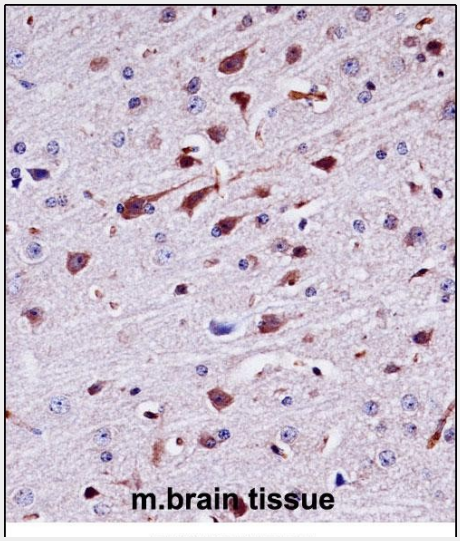
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Mouse Ptk2b Antibody (Center) (Cat. #AP14279c) western blot analysis in K562 cell line lysates (35ug/lane).This demonstrates the Ptk2b antibody detected the Ptk2b protein (arrow).



Mouse Ptk2b Antibody (Center) (Cat. #AP14279c) western blot analysis in mouse spleen tissue lysates (35ug/lane).This demonstrates the Ptk2b antibody detected the Ptk2b protein (arrow).



Mouse Ptk2b Antibody (Center) (AP14279c)immunohistochemistry analysis in formalin fixed and paraffin embedded mouse brain tissue followed by peroxidase conjugation of the secondary antibody and DAB staining.This data demonstrates the use of Mouse Ptk2b Antibody (Center) for immunohistochemistry. Clinical relevance has not been evaluated.

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Mouse Ptk2b Antibody (Center) - Background

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 (By similarity).