

Mouse Ptk2b Blocking Peptide (P769)
Synthetic peptide
Catalog # BP20931a**Specification****Mouse Ptk2b Blocking Peptide (P769) - Product Information**

Primary Accession [Q9QVP9](#)
Other Accession [P70600](#), [Q14289](#)

Mouse Ptk2b Blocking Peptide (P769) - 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

The synthetic peptide sequence is selected
from aa 769-782 of HUMAN Ptk2b

Format

Peptides are lyophilized in a solid powder
format. Peptides can be reconstituted in
solution using the appropriate buffer as
needed.

Storage

Maintain refrigerated at 2-8°C for up to 6
months. For long term storage store at
-20°C.

Precautions

This product is for research use only. Not
for use in diagnostic or therapeutic
procedures.

Mouse Ptk2b Blocking Peptide (P769) - Protein Information

Name Ptk2b

Mouse Ptk2b Blocking Peptide (P769) - 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' (By similarity).
Promotes phosphorylation of NMDA receptors
by SRC family members, and thereby

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

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).

Mouse Ptk2b Blocking Peptide (P769) - References

Avraham S.,et al.J. Biol. Chem. 270:27742-27751(1995).
Church D.M.,et al.PLoS Biol. 7:E1000112-E1000112(2009).
Mural R.J.,et al.Submitted (JUL-2005) to the EMBL/GenBank/DDBJ databases.
Lubec G.,et al.Submitted (JAN-2009) to UniProtKB.
Salgia R.,et al.J. Biol. Chem. 271:31222-31226(1996).

increases SRC kinase activity.
Phosphorylates ASAP1, NPHP1, KCNA2 and SHC1. Promotes phosphorylation of ASAP2, RHOA 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 Blocking Peptide (P769) - Protocols

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

- [Blocking Peptides](#)