10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Mouse Ptk2 Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP14458c

Specification

Mouse Ptk2 Antibody (Center) - Product Information

Application	**WB,E**
Primary Accession	P34152
Other Accession	NP_032008.2, NP_001123881.1
Reactivity	**Mouse**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Calculated MW	**119243**
Antigen Region	**426-453**

Mouse Ptk2 Antibody (Center) - Additional Information

Gene ID 14083

Other Names
Focal adhesion kinase 1, FADK 1, Focal adhesion kinase-related nonkinase, FRNK, Protein-tyrosine kinase 2, p125FAK, pp125FAK, Ptk2, Fadk, Fak, Fak1, Kiaa4203

Target/Specificity
This Mouse Ptk2 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 426-453 amino acids from the Central region of mouse Ptk2.

Dilution
WB~~1:1000

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 Ptk2 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Mouse Ptk2 Antibody (Center) - Protein Information

Name Ptk2 {ECO:0000312|MGI:MGI:95481}

Synonyms Fadk, Fak, Fak1, Kiaa4203

Function Non-receptor protein-tyrosine kinase that plays an essential role in regulating cell migration, adhesion, spreading, reorganization of the actin cytoskeleton, formation and disassembly of focal adhesions and cell protrusions, cell cycle progression, cell proliferation and apoptosis. Required for early embryonic development and placenta development. Required for embryonic angiogenesis, normal cardiomyocyte migration and proliferation, and normal heart development. Regulates axon growth and neuronal cell migration, axon branching and synapse formation; required for normal development of the nervous system. Plays a role in osteogenesis and differentiation of osteoblasts. Functions in integrin signal transduction, but also in signaling downstream of numerous growth factor receptors, G-protein coupled receptors (GPCR), EPHA2, netrin receptors and LDL receptors. 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 the AKT1 signaling cascade. Promotes activation of MAPK1/ERK2, MAPK3/ERK1 and the MAP kinase signaling cascade. Promotes localized and transient activation of guanine nucleotide exchange factors (GEFs) and GTPase-activating proteins (GAPs), and thereby modulates the activity of Rho family GTPases. Signaling via CAS family members mediates activation of RAC1. Phosphorylates NEDD9 following integrin stimulation (PubMed:25059660). Recruits the ubiquitin ligase MDM2 to P53/TP53 in the nucleus, and thereby regulates P53/TP53 activity, P53/TP53 ubiquitination and proteasomal degradation. Phosphorylates SRC; this increases SRC kinase activity. Phosphorylates ACTN1, ARHGEF7, GRB7, RET and WASL. Promotes phosphorylation of PXN and STAT1; most likely PXN and STAT1 are phosphorylated by a SRC family kinase that is recruited to autophosphorylated PTK2/FAK1, rather than by PTK2/FAK1 itself. Promotes phosphorylation of BCAR1; GIT2 and SHC1; this requires both SRC and PTK2/FAK1. Promotes phosphorylation of BMX and PIK3R1.

Cellular Location
Cell junction, focal adhesion. Cell membrane {ECO:0000250|UniProtKB:Q00944}; Peripheral membrane protein {ECO:0000250|UniProtKB:Q00944}; Cytoplasmic side {ECO:0000250|UniProtKB:Q00944}. Cytoplasm, perinuclear region. Cytoplasm, cell cortex. Cytoplasm, cytoskeleton {ECO:0000250|UniProtKB:O35346}. Cytoplasm, cytoskeleton, microtubule organizing center, centrosome. Nucleus. Cytoplasm, cytoskeleton, cilium basal body {ECO:0000250|UniProtKB:Q05397}. Cytoplasm. Note=Constituent of focal adhesions Detected at microtubules.

Mouse Ptk2 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 Ptk2 Antibody (Center) - Images

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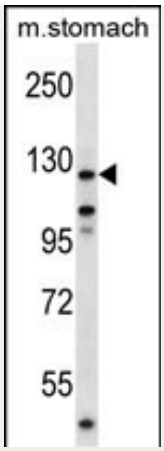

Mouse Ptk2 Antibody (Center) (Cat. #AP14458c) western blot analysis in mouse stomach tissue lysates (35ug/lane).This demonstrates the Ptk2 antibody detected the Ptk2 protein (arrow).

Mouse Ptk2 Antibody (Center) - Background

Non-receptor protein-tyrosine kinase implicated in signaling pathways involved in cell motility, proliferation and apoptosis. Activated by tyrosine-phosphorylation in response to either integrin clustering induced by cell adhesion or antibody cross-linking, or via G-protein coupled receptor (GPCR) occupancy by ligands such as bombesin or lysophosphatidic acid, or via LDL receptor occupancy. Microtubule-induced dephosphorylation at Tyr-397 is crucial for the induction of focal adhesion disassembly (By similarity). Plays a potential role in oncogenic transformations resulting in increased kinase activity.

Mouse Ptk2 Antibody (Center) - References

Enciso, J.M., et al. Dev. Dyn. 239(10):2570-2583(2010)
Beverdam, A., et al. Dev. Dyn. 239(10):2735-2741(2010)
Ma, Y., et al. FEBS Lett. 584(18):3949-3954(2010)
Beinke, S., et al. Proc. Natl. Acad. Sci. U.S.A. 107(37):16234-16239(2010)
Ashton, G.H., et al. Dev. Cell 19(2):259-269(2010)