

PTK2 Antibody (Center) Blocking Peptide
Synthetic peptide
Catalog # BP8614c**Specification****PTK2 Antibody (Center) Blocking Peptide -
Product Information**Primary Accession [Q05397](#)**PTK2 Antibody (Center) Blocking Peptide -
Additional Information****Gene ID** 5747**Other Names**

Focal adhesion kinase 1, FADK 1, Focal adhesion kinase-related nonkinase, FRNK, Protein phosphatase 1 regulatory subunit 71, PPP1R71, Protein-tyrosine kinase 2, p125FAK, pp125FAK, PTK2, FAK, FAK1

Target/Specificity

The synthetic peptide sequence used to generate the antibody [AP8614c](/products/AP8614c) was selected from the Center region of human PTK2. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

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.

**PTK2 Antibody (Center) Blocking Peptide -
Protein Information****PTK2 Antibody (Center) Blocking Peptide -
Background**

PTK2 is a cytoplasmic protein tyrosine kinase which is found concentrated in the focal adhesions that form between cells growing in the presence of extracellular matrix constituents. This protein is a member of the FAK subfamily of protein tyrosine kinases but lacks significant sequence similarity to kinases from other subfamilies.

**PTK2 Antibody (Center) Blocking Peptide -
References**

Calalb,M.B., et.al., Mol. Cell. Biol. 15 (2), 954-963 (1995) Polte,T.R. et.al., Proc. Natl. Acad. Sci. U.S.A. 92 (23), 10678-10682 (1995) Gervais,F.G., et.al., J. Biol. Chem. 273 (27), 17102-17108 (1998)

Name PTK2 ([HGNC:9611](#))

Synonyms FAK, FAK1

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. 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. Isoform 6 (FRNK) does not contain a kinase domain and inhibits PTK2/FAK1 phosphorylation and signaling. Its enhanced expression can attenuate the nuclear accumulation of LPXN and limit its ability to enhance serum response factor (SRF)-dependent gene transcription.

Cellular Location

Cell junction, focal adhesion. Cell membrane; Peripheral membrane protein; Cytoplasmic side. Cytoplasm, cell cortex
Cytoplasm, cytoskeleton. Cytoplasm, cytoskeleton, microtubule organizing center, centrosome. Nucleus. Cytoplasm, cytoskeleton, cilium basal body
Note=Constituent of focal adhesions.
Detected at microtubules

Tissue Location

Detected in B and T-lymphocytes. Isoform 1 and isoform 6 are detected in lung fibroblasts (at protein level) Ubiquitous. Expressed in epithelial cells (at protein level) (PubMed:31630787).

PTK2 Antibody (Center) Blocking Peptide - Protocols

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

- [Blocking Peptides](#)