

Anti-FAK Picoband Antibody

Catalog # ABO12360

Product Information

Application	WB
Primary Accession	Q05397
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized
Description	Rabbit IgG polyclonal antibody for Focal adhesion kinase 1(PTK2) detection. Tested with WB in Human;Mouse;Rat.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Additional Information

Gene ID	5747
Other Names	Focal adhesion kinase 1, FADK 1, 2.7.10.2, Focal adhesion kinase-related nonkinase, FRNK, Protein phosphatase 1 regulatory subunit 71, PPP1R71, Protein-tyrosine kinase 2, p125FAK, pp125FAK, PTK2, FAK, FAK1
Calculated MW	119233
Application Details	Western blot, 0.1-0.5 µg/ml, Human, Mouse, Rat
Subcellular Localization	Cell junction, focal adhesion. Cell membrane; Peripheral membrane protein; Cytoplasmic side. Cytoplasm, cell cortex. Cytoplasm, cytoskeleton. Cytoplasm, cytoskeleton, microtubule organizing center, centrosome . Nucleus. Constituent of focal adhesions. Detected at microtubules.
Tissue Specificity	Detected in B and T-lymphocytes. Isoform 1 and isoform 6 are detected in lung fibroblasts (at protein level). Ubiquitous. .
Source	Eukaryota
Protein Name	Focal adhesion kinase 1
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na ₂ HPO ₄ , 0.05mg NaN ₃ .
Immunogen	A synthetic peptide corresponding to a sequence at the C-terminus of human PTK2 (1024-1052aa AHALAVDAKNLLDVIDQARLKMLGQTRPH), identical to the related mouse and rat sequences.
Purification	Immunogen affinity purified.

Cross Reactivity	No cross reactivity with other proteins
Storage	At -20° C for one year. After r° Constitution, at 4° C for one month. It° Can also be aliquotted and stored frozen at -20° C for a longer time.Avoid repeated freezing and thawing.

Protein Information

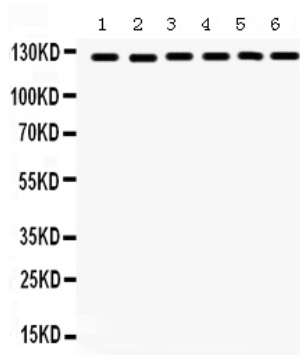
Name	PTK2 (HGNC:9611)
Synonyms	FAK, FAK1
Function	Non-receptor protein-tyrosine kinase that plays an essential role in regulating cell migration, adhesion, spreading, reorganization of the actin cytoskeleton, formation and disassembly of focal adhesions and cell protrusions, cell cycle progression, cell 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. Phosphorylates NEDD9 following integrin stimulation (PubMed:9360983). 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 {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 Cytoplasm Note=Constituent of focal adhesions. Detected at microtubules {ECO:0000250 UniProtKB:P34152}
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).

Background

PTK2 protein tyrosine kinase 2 (PTK2), also known as Focal Adhesion Kinase (FAK), is a protein that, in humans, is encoded by the PTK2 gene. This gene encodes 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. The encoded protein is a member of the FAK subfamily of protein tyrosine kinases but lacks significant sequence similarity to kinases from other subfamilies. Activation of this gene may be an important early step in cell growth and intracellular signal transduction pathways triggered in response to certain neural peptides or to cell interactions with the extracellular matrix. Several transcript variants encoding different isoforms have been found for this gene, but the full-length nature of only three of them have been determined.

Images



Anti- FAK Picoband antibody, ABO12360, Western blotting
All lanes: Anti FAK (ABO12360) at 0.5ug/ml
Lane 1: Rat Lung Tissue Lysate at 50ug
Lane 2: Mouse Lung Tissue Lysate at 50ug
Lane 3: Rat Brain Tissue Lysate at 50ug
Lane 4: U2OS Whole Cell Lysate at 40ug
Lane 5: HELA Whole Cell Lysate at 40ug
Lane 6: NIH3T3 Whole Cell Lysate at 40ug
Predicted bind size: 125KD
Observed bind size: 125KD

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.