

Anti-FAK PTK2 Rabbit Monoclonal Antibody
Catalog # ABO13246**Specification****Anti-FAK PTK2 Rabbit Monoclonal Antibody - Product Information**

Application	WB, IHC, IF, ICC, IP, FC
Primary Accession	Q05397
Host	Rabbit
Isotype	Rabbit IgG
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Format	Liquid

Description

Anti-FAK PTK2 Rabbit Monoclonal Antibody . Tested in WB, IHC, ICC/IF, IP, Flow Cytometry applications. This antibody reacts with Human, Mouse, Rat.

Anti-FAK PTK2 Rabbit Monoclonal Antibody - 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 (http://www.genenames.org/cgi-bin/gene_symbol_report?hgnc_id=9611 target="_blank">HGNC:9611), FAK, FAK1

Calculated MW

119233 MW KDa

Application Details

WB 1:500-1:2000
IHC 1:50-1:200
ICC/IF 1:50-1:200
IP 1:30
FC 1:50

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..

Contents

Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.

Immunogen

A synthesized peptide derived from human FAK

Purification

Affinity-chromatography

Storage

Store at -20°C for one year. For short term storage and frequent use, store at 4°C for up to one month. Avoid repeated freeze-thaw cycles.

Anti-FAK PTK2 Rabbit Monoclonal Antibody - 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

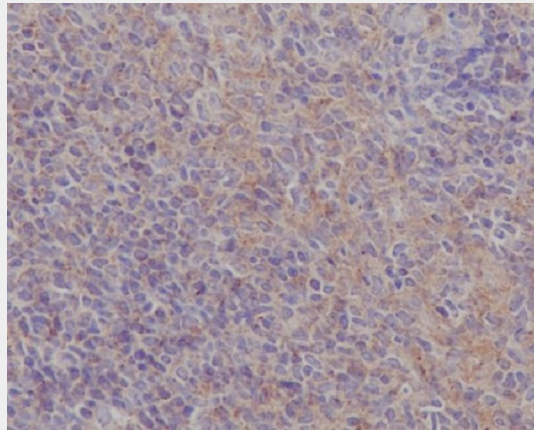
Detected in B and T-lymphocytes. Isoform 1 and isoform 6 are detected in lung fibroblasts (at protein level) Ubiquitous. Expressed in epithelial cells (at protein level) (PubMed:31630787).

Anti-FAK PTK2 Rabbit Monoclonal Antibody - Protocols

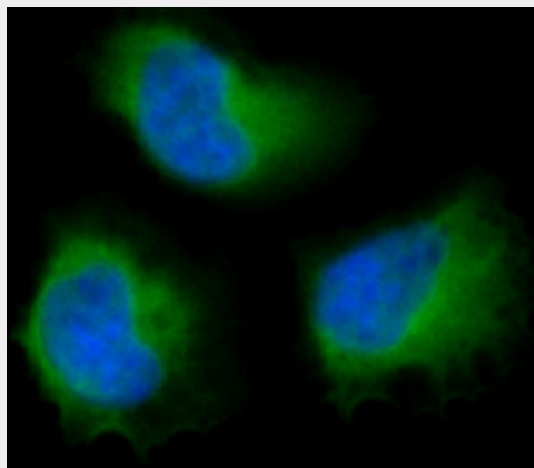
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

Anti-FAK PTK2 Rabbit Monoclonal Antibody - Images



Immunohistochemical analysis of paraffin-embedded mouse spleen, using FAK Antibody.



Immunofluorescent analysis of HeLa cells, using FAK Antibody.

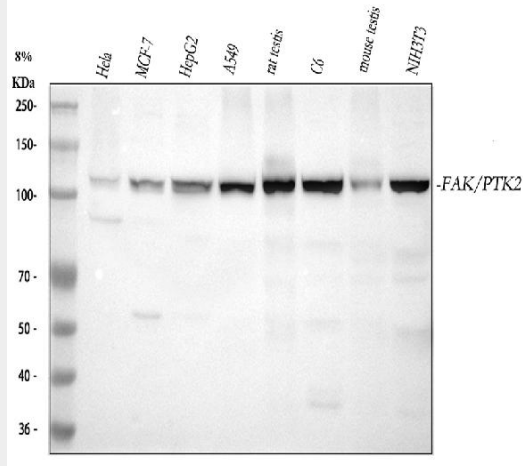


Figure 1. Western blot analysis of FAK using anti-FAK antibody (M00151).

Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions.

- Lane 1: human Hela whole cell lysates,
- Lane 2: human MCF-7 whole cell lysates,
- Lane 3: human HepG2 whole cell lysates,
- Lane 4: human A549 whole cell lysates,
- Lane 5: rat testis tissue lysates,
- Lane 6: rat C6 whole cell lysates,
- Lane 7: mouse testis tissue lysates,
- Lane 8: mouse NIH/3T3 whole cell lysates.

After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-FAK antigen affinity purified monoclonal antibody (Catalog # M00151) at 1:500 overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:500 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for FAK at approximately 119 kDa. The expected band size for FAK is at 119 kDa.