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Anti-FAK Antibody

Mouse Anti Human Monoclonal Antibody
Catalog # AP53408

Product Information

Application	WB, IF, IP
Primary Accession	Q05397
Other Accession	NM_153831.2
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	IgG1
Immunogen	Purified recombinant human FAK protein fragments expressed in E.coli.
Purification	Affinity purified
Calculated MW	119233

Additional Information

Gene ID	5747
Other Names	FADK 1;FADK;FAK 1;FAK 1;FAK related non kinase polypeptide;FAK1;FAK1_HUMAN;Focal adhesion kinase 1;Focal adhesion kinase 1;Focal adhesion Kinase;Focal adhesion kinase isoform FAK Del33;Focal adhesion kinase related nonkinase;FRNK;p125FAK;pp125FAK;pp125FAK;PPP1R71;Protein phosphatase 1 regulatory subunit 71;Protein tyrosine kinase 2;Protein Tyrosine Kinase Cytoplasmic;Protein Tyrosine Kinase Cytoplasmic;Protein-tyrosine kinase 2;PTK 2;PTK 2;PTK2;PTK2 protein tyrosine kinase 2;PTK2 protein tyrosine kinase 2.
Dilution	WB~~1:1000 IF~~1:50~200 IP~~N/A
Format	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide, pH 7.3.
Storage	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.

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

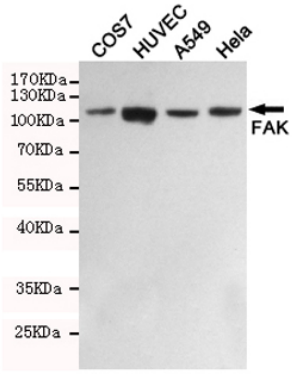
	cytoskeleton, formation and disassembly of focal adhesions and cell protrusions, cell cycle progression, cell proliferation and apoptosis. Required for early embryonic development and placenta development. Required for embryonic angiogenesis, normal cardiomyocyte migration and proliferation, and normal 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

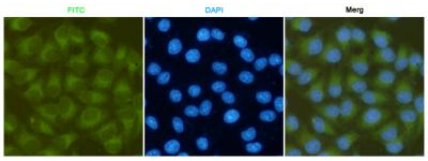
Non-receptor protein-tyrosine kinase that plays an essential role in regulating cell migration, adhesion, spreading, reorganization of the actin cytoskeleton, formation and disassembly of focal adhesions and cell protrusions, cell cycle progression, cell

Images

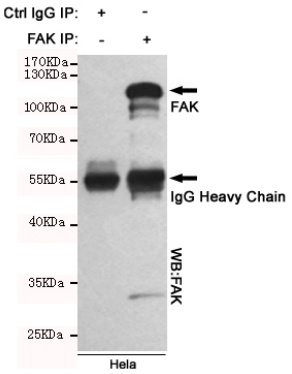
Western blot detection of FAK in COS7,HUVEC,A549 and



Hela cell lysates using FAK mouse mAb (1:1000 diluted).Predicted band size: 125KDa.Observed band size:125KDa.



Immunofluorescent analysis of Hela cells fixed fixed by anhydrous methanol at -20℃ and using FAK mouse mAb (dilution 1:200).



Immunoprecipitation analysis of Hela cell lysates using FAK mouse mAb.

Citations

- Anterior gradient 2 is induced in cutaneous wound and promotes wound healing through its adhesion domain.

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