

Rabbit FAK Polyclonal Antibody | anti-FAK antibody

Phospho-FAK (Tyr577) Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA329692	Rabbit	Human, Mouse, Rat Predicted Reactivity: Pig (100%), Horse (100%), Sheep (100%), Rabbit (100%), Dog (100%), Chicken (100%), Xenopus (100%)	ELISA, Immunocytochemistry, Immunofluorescence, Immunohistochemistry, Western Blot

PRODUCT SYNONYMS

FAK; Polyclonal Antibody; Phospho-FAK (Tyr577) Antibody; FADK 1; FADK; FAK related non kinase polypeptide; FAK1; FAK1_HUMAN; Focal adhesion kinase 1; Focal adhesion Kinase; Focal adhesion kinase isoform FAK Del33; Focal adhesion kinase related nonkinase; FRNK; p125FAK; pp125FAK; PPP1R71; Protein phosphatase 1 regulatory subunit 71; Protein tyrosine kinase 2; Protein-tyrosine kinase 2; Ptk2; PTK2 protein tyrosine kinase 2; anti-FAK antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Rat Predicted Reactivity: Pig (100%), Horse (100%), Sheep (100%), Rabbit (100%), Dog (100%), Chicken (100%), Xenopus (100%)
Clonality	Polyclonal
Isotype	Rabbit IgG
Specificity	Phospho-FAK (Tyr577) Antibody detects endogenous levels of FAK only when phosphorylated at Tyr577. Tissue Specificity: Detected in B and T-lymphocytes. Isoform 1 and isoform 6 are detected in lung fibroblasts (at protein level). Ubiquitous.
Purity/Purification	The antibody is from purified rabbit serum by affinity purification via sequential chromatography on phospho-peptide and non-phospho-peptide affinity columns.
Form/Format	Liquid. Rabbit IgG in phosphate buffered saline, pH7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Applicable Applications for anti-FAK antibody	ELISA (Peptide ELISA), ICC (Immunocytochemistry), IF (Immunofluorescence), IHC (Immunohistochemistry), WB (Western Blot)
Immunogen	A synthesized peptide derived from human FAK around the phosphorylation site of Tyr577.
Conjugation	Unconjugated
Fragment	Fab fragment
Post Translational Modifications	Phosphorylated on tyrosine residues upon activation, e.g. upon integrin signaling. Tyr-397 is the major autophosphorylation site, but other kinases can also phosphorylate this residue. Phosphorylation at Tyr-397 promotes interaction with SRC and SRC family members, leading to phosphorylation at Tyr-576, Tyr-577 and at additional tyrosine residues. FGR promotes phosphorylation at Tyr-397 and Tyr-576. FER promotes phosphorylation at Tyr-577, Tyr-861 and Tyr-925, even when cells are not adherent. Tyr-397, Tyr-576 and Ser-722 are phosphorylated only when cells are adherent. Phosphorylation at Tyr-397 is important for interaction with BMX, PIK3R1 and SHC1. Phosphorylation at Tyr-925 is important for interaction with GRB2. Dephosphorylated by PTPN11; PTPN11 is recruited to PTK2 via EPHA2 (tyrosine phosphorylated). Microtubule-induced dephosphorylation at Tyr-397 is crucial for the induction of focal adhesion disassembly; this dephosphorylation could be catalyzed by PTPN11 and regulated by ZFYVE21. Phosphorylation on tyrosine residues is enhanced by NTN1 (By similarity). Sumoylated; this enhances autophosphorylation.

Subunit Structure	Interacts (via first Pro-rich region) with CAS family members (via SH3 domain), including BCAR1, BCAR3, CASS4 and NEDD9. Interacts with GIT1. Interacts with SORBS1. Interacts with ARHGEF28. Interacts with SHB. Interacts with PXN and TLN1. Interacts with STAT1. Interacts with DCC. Interacts with WASL. Interacts with ARHGEF7. Interacts with GRB2 and GRB7 (By similarity). Component of a complex that contains at least FER, CTTN and PTK2/FAK1. Interacts with BMX. Interacts with TGFB1I1. Interacts with STEAP4. Interacts with ZFYVE21. Interacts with ESR1. Interacts with PIK3R1 or PIK3R2. Interacts with SRC, FGR, FLT4 and RET. Interacts with EPHA2 in resting cells; activation of EPHA2 recruits PTPN11, leading to dephosphorylation of PTK2/FAK1 and dissociation of the complex. Interacts with EPHA1 (kinase activity-dependent). Interacts with CD4; this interaction requires the presence of HIV-1 gp120. Interacts with PIAS1. Interacts with ARHGAP26 and SHC1. Interacts with RB1CC1; this inhibits PTK2/FAK1 activity and activation of downstream signaling pathways. Interacts with P53/TP53 and MDM2. Interacts with LPXN (via LD motif 3). Interacts with MISP. Interacts with CIB1 isoform 2. Interacts with CD36. Interacts with EMP2; regulates PTK2 activation and localization. Interacts with DSCAM (By similarity).
Similarity	The Pro-rich regions interact with the SH3 domain of CAS family members, such as BCAR1 and NEDD9, and with the GTPase activating protein ARHGAP26.The carboxy-terminal region is the site of focal adhesion targeting (FAT) sequence which mediates the localization of FAK1 to focal adhesions.Belongs to the protein kinase superfamily. Tyr protein kinase family. FAK subfamily.
Subcellular Location	Cell junction>Focal adhesion. Cell membrane>Peripheral membrane protein>Cytoplasmic side. Cytoplasm>Cell cortex. Cytoplasm>Cytoskeleton. Cytoplasm>Cytoskeleton>Microtubule organizing center>Centrosome. Nucleus. Note: Constituent of focal adhesions. Detected at microtubules.
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.

IMAGES



Application Data

At 25 degree C. The primary antibody was diluted at 1/200 and incubated with the sample for 1 hour at 37 degree C. An Alexa Fluor 594 conjugated goat anti-rabbit IgG (H+L) Ab, diluted at 1/600, was used as the secondary antibody.



IHC (Immunohistochemistry)

At 1/200 staining Human kidney tissue sections by IHC-P. The tissue was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The tissue was then blocked and incubated with the antibody for 1.5 hours at 22 degree C. An HRP conjugated goat anti-rabbit antibody was used as the secondary antibody.



IHC (Immunohistochemisry)

At 1/200 staining Mouse kidney tissue sections by IHC-P. The tissue was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The tissue was then blocked and incubated with the antibody for 1.5 hours at 22 degree C. An HRP conjugated goat anti-rabbit antibody was used as the secondary antibody.



IHC (Immunohiostchemistry)

Staining Rat spleen tissue sections by IHC-P. The tissue was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The tissue was then blocked and incubated with the antibody for 1.5 hours at 22 degree C. An HRP conjugated goat anti-rabbit antibody was used as the secondary antibody.



WB (Western Blot)

Western blot analysis FAK (Phospho-Tyr577) using TNF- α treated HeLa whole cell lysates.-/+ means absence or presence of N peptide(1/4 non-phospho peptide) and P peptide(phospho peptide).

ADDITIONAL INFORMATION

Related Product Information for anti-FAK antibody	<p>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.</p>
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NCBI AND UNIPROT INFORMATION

NCBI GI #	313851044
NCBI GeneID	5747
NCBI Accession #	NP_001186578.1
NCBI GenBank Nucleotide #	NM_001199649.1
UniProt Accession #	Q05397 ; Q14291 ; Q9UD85 ; B4E2N6 ; F5H4S4
Molecular Weight	119,233 Da
NCBI Official Full Name	focal adhesion kinase 1 isoform c
NCBI Official Synonym Full Names	protein tyrosine kinase 2
NCBI Official Symbol	PTK2
NCBI Official Synonym Symbols	FAK; FADK; FAK1; FRNK; PPP1R71; p125FAK; pp125FAK
NCBI Protein Information	focal adhesion kinase 1; FADK 1; PTK2 protein tyrosine kinase 2; FAK-related non-kinase polypeptide; focal adhesion kinase-related nonkinase; protein phosphatase 1 regulatory subunit 71; protein phosphatase 1, regulatory subunit 71
UniProt Protein Name	Focal adhesion kinase 1
UniProt Gene Name	PTK2
UniProt Synonym Gene Names	FAK; FAK1; FADK 1; FRNK; PPP1R71
UniProt Entry Name	FAK1_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/polyclonal/fak-antibody-peptide-elisa-immunocytochemistry-immunofluorescence-immunohistochemistry-western-blot-elisa/329692>