FAK Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

Product Name	FAK, Polyclonal Antibody
Full Product Name	FAK (phospho Ser910) Polyclonal Antibody
Product Gene Name	anti-FAK antibody
Product Synonym Names	PTK2; FAK; FAK1; 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
Clonality	Polyclonal
Host	Rabbit
Species Reactivity	Human, Mouse, Rat
Form/Format	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
Purity/Purification	Affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.
Concentration	1 mg/ml (lot specific)
Specificity	Phospho-FAK (S910) Polyclonal Antibody detects endogenous levels of FAK protein only when phosporylated at S910.
Preparation and Storage	-20°C/1 year
Molecular Weight	119.233
OMIM	600758
3D Structure	ModBase 3D Structure for Q05397
Immunogen	Synthesized peptide derived from human FAK around the phosphorylation site of S910.
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Applications Tested/Suitable for anti-FAK antibody	Immunohistochemistry (IHC), Immunofluorescence (IF), ELISA (EIA).
Application Notes for anti-FAK antibody	Dilution: Immunohistochemistry: 1/100 - 1/300. Immunofluorescence: 1/200 - 1/1000. ELISA: 1/5000. Not yet tested in other applications.
Related Product Information for anti-FAK antibody	MBS8520920 is an antibody targeting FAK. Also known as FAK (phospho Ser910) Polyclonal Antibody. Reactive in Human, Mouse, Rat. Host: Rabbit.
Other Notes	Small volumes of anti-FAK antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for FAK. It may not necessarily be applicable to this product.

NCBI GI #	313851044
NCBI GeneID	5747

NCBI Accession #	NP_001186578.1
UniProt Primary Accession #	Q05397
UniProt Secondary Accession #	Q14291; Q8IYN9; Q9UD85; B4E2N6; F5H4S4; J3QT16
UniProt Related Accession #	Q05397
GenBank Nucleotide #	NM_001199649.1
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
UniProt Protein Name	Focal adhesion kinase 1
UniProt Synonym Protein Names	Focal adhesion kinase-related nonkinase; FRNK; Protein phosphatase 1 regulatory subunit 71; PPP1R71; Protein-tyrosine kinase 2; p125FAK; pp125FAK
Protein Family	RB1-inducible coiled-coil protein
UniProt Gene Name	PTK2
UniProt Synonym Gene Names	FAK; FAK1; FADK 1; FRNK; PPP1R71
NCBI Protein Information	focal adhesion kinase 1
NCBI Summary for FAK	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. [provided by RefSeq, Jun 2017]
UniProt Comments for FAK	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.
Research Articles on FAK	**1.** The ectopic overexpression of miR-379 inhibited cell migration, invasion and EMT progress, while downregulated miR-379 reversed the effect. In addition, miR-379 regulated the focal adhesion kinase (FAK) by directly binding to its 3'-UTR, resulting in suppression of AKT signaling. In clinical samples of gastric cancer (GC), miR-379 inversely correlated with FAK, which was upregulated in GC.

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