

Product datasheet for **TA328127**

FAK (PTK2) Mouse Monoclonal Antibody [Clone ID: 1297CT261.163.145]

Product data:

Product Type:	Primary Antibodies
Clone Name:	1297CT261.163.145
Applications:	WB
Recommended Dilution:	WB: 1:1000
Reactivity:	Human
Host:	Mouse
Isotype:	IgG1
Clonality:	Monoclonal
Immunogen:	This PTK2 antibody is generated from a mice immunized with a recombinant protein between 1-128 amino acids from the N-terminal region of human PTK2.
Formulation:	PBS with 0.09% (W/V) sodium azide
Concentration:	lot specific
Purification:	This antibody is purified through a protein G column, followed by dialysis against PBS.
Conjugation:	Unconjugated
Storage:	Store at -20°C as received.
Stability:	Stable for 12 months from date of receipt.
Gene Name:	protein tyrosine kinase 2
Database Link:	NP_722560 Entrez Gene 5747 Human Q05397



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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 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.

Synonyms:

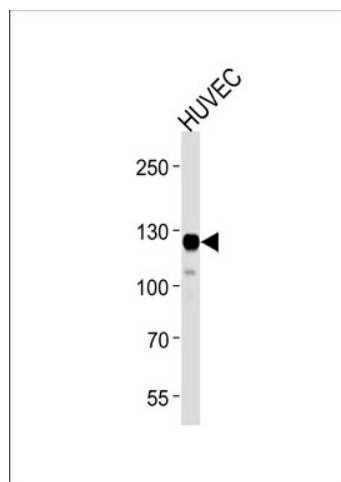
FADK; FAK; FAK1; FRNK; p125FAK; pp125FAK; PPP1R71

Protein Families:

Druggable Genome, Protein Kinase

Protein Pathways:

Axon guidance, Chemokine signaling pathway, ErbB signaling pathway, Focal adhesion, Leukocyte transendothelial migration, Pathways in cancer, Regulation of actin cytoskeleton, Small cell lung cancer, VEGF signaling pathway

Product images:

Western blot analysis of lysate from HUVEC cell line, using PTK2 Antibody (N-term) (Cat. #TA328127).TA328127 was diluted at 1:1000 at each lane. A goat anti-mouse IgG H&L (HRP) at 1:3000 dilution was used as the secondary antibody.Lysate at 35ug per lane.