

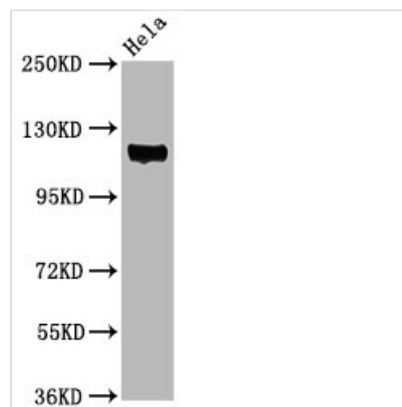


# Phospho-PTK2 (Y397) Antibody

<b>Product Code</b>	CSB-RA018994A397phHU
<b>Abbreviation</b>	Focal adhesion kinase 1
<b>Storage</b>	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.
<b>Uniprot No.</b>	Q05397
<b>Immunogen</b>	A synthesized peptide derived from Human Phospho-PTK2 (Y397)
<b>Species Reactivity</b>	Human
<b>Tested Applications</b>	ELISA, WB; Recommended dilution: WB:1:500-1:5000
<b>Relevance</b>	<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>
<b>Form</b>	Liquid
<b>Conjugate</b>	Non-conjugated



<b>Storage Buffer</b>	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
<b>Purification Method</b>	Affinity-chromatography
<b>Isotype</b>	Rabbit IgG
<b>Clonality</b>	Monoclonal
<b>Alias</b>	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, PTK2, FAK, FAK1
<b>Immunogen Species</b>	Homo sapiens (Human)
<b>Research Area</b>	Cardiovascular
<b>Gene Names</b>	PTK2
<b>Accession NO.</b>	1B3

**Image**

**Western Blot**

Positive WB detected in Hela whole cell lysate  
 All lanes Phospho-PTK2 antibody at 3.05µg/ml  
 Secondary  
 Goat polyclonal to rabbit IgG at 1/50000 dilution  
 Predicted band size: 119 KDa  
 Observed band size: 119 KDa

**Description**

CUSABIO cloned PTK2 antibody-coding genes into plasma vectors and then transfected these vector clones into mammalian cells using a lipid-based transfection reagent. Following transient expression, the recombinant antibodies against PTK2 were harvested and characterized. The recombinant PTK2 antibody was purified by affinity-chromatography from the culture medium. It can be used to detect PTK2 protein from Human in the ELISA, WB.

PTK2 encodes a cytoplasmic protein tyrosine kinase that was found to be concentrated in focal adhesions formed between cells with components of the extracellular matrix. Diseases associated with PTK2 include malignant astrocytoma and ovarian cancer. Its related pathways include the NF-kappaB pathway and cytokine signaling in the immune system. According to some studies, PTK2 may have the following features.

PTK2 promotes the cancer stem cell signature of hepatocellular carcinoma by activating Wnt/β-catenin signaling. MiR-520d-5p inhibits CC cell proliferation, invasion and migration by targeting PTK2. PTK2 and EIF3S3 genes may be amplified targets of 8q23-q24 and are associated with large hepatocellular carcinoma. Moving and resting actin filaments are involved in the spreading of PTK2 cells after mitosis.