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Rabbit Anti-phospho-FAK (Tyr577) antibody

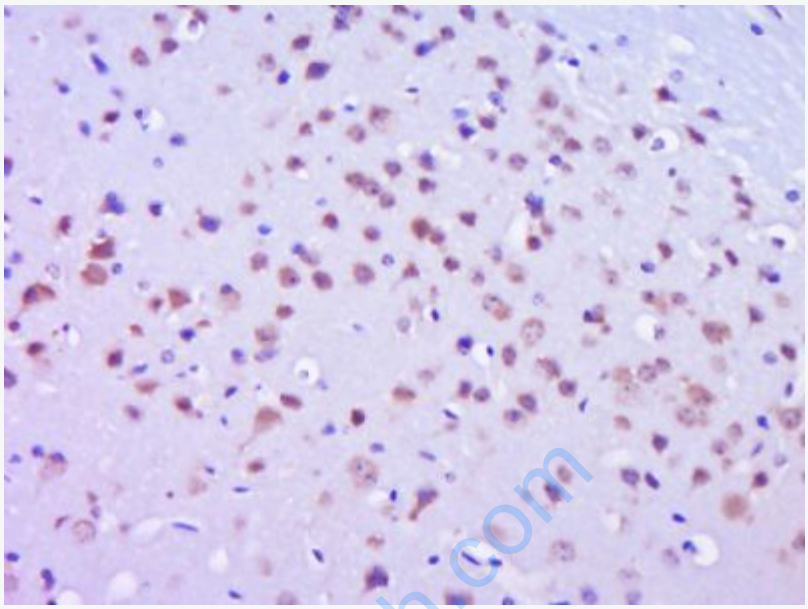
SL1639R

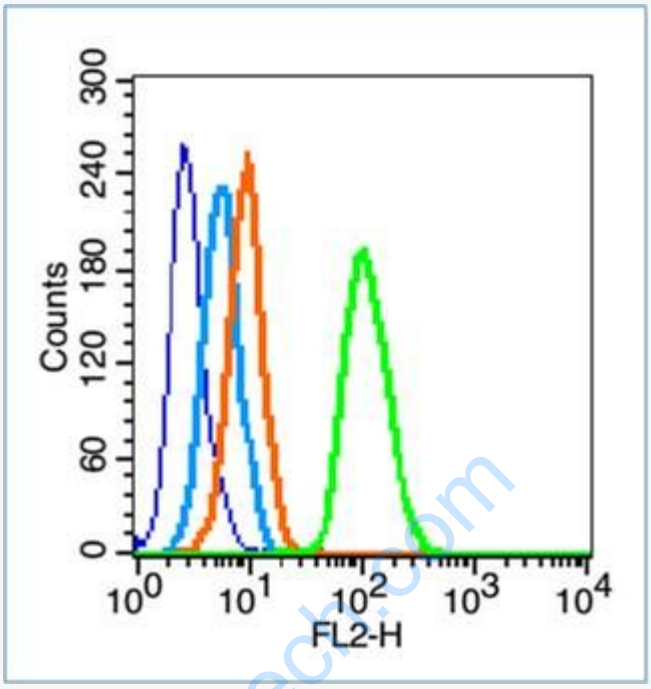
Product Name:	phospho-FAK (Tyr577)
Chinese Name:	磷酸化粘着斑激酶抗体
Alias:	FAK (phospho Y577); p-FAK (phospho Y577); FADK 1; FADK; FAK 1; FAK related non kinase polypeptide; FAK1; Focal adhesion kinase 1; FRNK; pp125FAK; Protein tyrosine kinase 2; Protein Tyrosine Kinase Cytoplasmic; PTK 2; FAK1_HUMAN; Focal adhesion kinase-related nonkinase; Protein phosphatase 1 regulatory subunit 71; PPP1R71; Protein-tyrosine kinase 2; p125FAK.
Organism Species:	Rabbit
Clonality:	Polyclonal
React Species:	Human,Mouse,Rat,
Applications:	WB=1:500-2000ELISA=1:500-1000IHC-P=1:400-800IHC-F=1:400-800Flow-Cyt=1μg /testIF=1:100-500（Paraffin sections need antigen repair） not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight:	116kDa
Cellular localization:	The nucleuscytoplasmicThe cell membrane
Form:	Lyophilized or Liquid
Concentration:	1mg/ml
immunogen:	KLH conjugated Synthesised phosphopeptide derived from human FAK around the phosphorylation site of Tyr577:TY(p-Y)KA
Lsotype:	IgG
Purification:	affinity purified by Protein A
Storage Buffer:	0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.
Storage:	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.
PubMed:	PubMed
Product Detail:	Non-receptor protein-tyrosine kinase implicated in signaling pathways involved in cell

	motility, proliferation and apoptosis. Activated by tyrosine-phosphorylation in response to either integrin clustering induced by cell adhesion or antibody cross-linking, or via G-protein coupled receptor (GPCR) occupancy by ligands such as bombesin or lysophosphatidic acid, or via LDL receptor occupancy. Plays a potential role in oncogenic transformations resulting in increased kinase activity. [SUBCELLULAR LOCATION] Cell junction, focal adhesion. Cell membrane; Peripheral membrane protein; Cytoplasmic side. Note=Constituent of focal adhesions. **Function:** Non-receptor protein-tyrosine kinase implicated in signaling pathways involved in cell motility, proliferation and apoptosis. Activated by tyrosine-phosphorylation in response to either integrin clustering induced by cell adhesion or antibody cross-linking, or via G-protein coupled receptor (GPCR) occupancy by ligands such as bombesin or lysophosphatidic acid, or via LDL receptor occupancy. Microtubule-induced dephosphorylation at Tyr-397 is crucial for the induction of focal adhesion disassembly. Plays a potential role in oncogenic transformations resulting in increased kinase activity. **Subunit:** 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 RGNEF. 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). **Subcellular Location:** Cell junction, focal adhesion. Cell membrane; Peripheral membrane protein; Cytoplasmic side. Cytoplasm, cell cortex. Cytoplasm, cytoskeleton. Cytoplasm, cytoskeleton, centrosome. Nucleus. Note=Constituent of focal adhesions. Detected at microtubules. **Tissue Specificity:** Detected in B and T-lymphocytes. Isoform 1 and isoform 6 are detected in lung fibroblasts (at protein level). Ubiquitous. **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. Sumoylated; this enhances autophosphorylation. **DISEASE:** Note=Aberrant PTK2/FAK1 expression may play a role in cancer cell proliferation, migration and invasion, in tumor formation and metastasis. PTK2/FAK1 overexpression is seen in many types of cancer. **Similarity:** Belongs to the protein kinase superfamily. Tyr protein kinase family. FAK subfamily. Contains 1 FERM domain. Contains 1 protein kinase domain. **SWISS:** Q05397 **Gene ID:** 5747 **Database links:** Entrez Gene: 5747 Human Entrez Gene: 14083 Mouse Entrez Gene: 25614 Rat Omim: 600758 Human SwissProt: Q05397 Human SwissProt: P34152 Mouse SwissProt: O35346 Rat

	Unigene: 395482 Human Unigene: 254494 Mouse Unigene: 2809 Rat **Important Note:** This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications. FAK是整合蛋白介导的Signal transduction中的重要成员,有酪氨酸蛋白激酶活性,并可自身磷酸化,FAK本身是胱冬肽酶(caspase)的底物。作为信号分子的FAK参与抑制Apoptosis并直接参与细胞多种功能的调节。 ????1.FAK局部粘着斑激酶，是一种酪氨酸激酶;Tumour细胞的侵袭性生长是一个多步骤的复杂过程，有多种生物化学因子参与其中,局部粘着斑激酶（focal adhesion kinase, FAK）介导的Signal transduction系统就是其中最为重要的细胞Signal transduction途径之一。Tumour细胞必须黏附于Extracellular matrix，通过促进依赖于PTK激酶活性的Extracellular matrixSignal transduction，进而影响细胞的黏附、运动与迁移。 ????2.粘着斑激酶(focal adhesion kinase,FAK)是整合蛋白介导的Signal transduction中的重要成员,有酪氨酸蛋白激酶活性,并可自身磷酸化;为信号分子的FAK,还与细胞内其他Signal transduction通路存在串话(crosstalk),直接参与了细胞多种功能的调节。 ????3.尽管FAK的确切功能尚不清楚,但若干实验均提示FAK可能有两个作用,一是在细胞铺展和移动时,FAK参与粘着斑形成和调节;二是FAK参与Signal transduction过程,以告知The nucleus其细胞已锚定了。近年有关FAK在Apoptosis中的作用也业已肯定。

Picture:	 Paraformaldehyde-fixed, paraffin embedded (mouse brain tissue); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (p-FAK(Tyr577)) Polyclonal Antibody, Unconjugated (SL1639R) at 1:400 overnight at 4°C, followed by a conjugated secondary (sp-0023) for 20 minutes and DAB staining.



Blank control (blue line): Hep G2 (blue).

Primary Antibody (green line): Rabbit Anti-phospho-FAK(Tyr577) antibody (SL1639R)

Dilution: 1µg /10^6 cells;

Isotype Control Antibody (orange line): Rabbit IgG .

Secondary Antibody (white blue line): Goat anti-rabbit IgG-PE

Dilution: 1µg /test.

Protocol

The cells were fixed with 70% ethanol (Overmight at 4℃) and then permeabilized with 90% ice-cold methanol for 30 min at -20℃.Cells stained with Primary Antibody for 30 min at room temperature. The cells were then incubated in 1 X PBS/2%BSA/10% goat serum to block non-specific protein-protein interactions followed by the antibody for 15 min at room temperature. The secondary antibody

	used for 40 min at room temperature. Acquisition of 20,000 events was performed.