

# p-FAK (Tyr 925): sc-101680

## BACKGROUND

Activation of integrins in the extracellular matrix (ECM) of eukaryotic cells promotes the formation of membrane adhesion complexes, known as focal adhesions, which can include cytoskeletal proteins and protein tyrosine kinases, such as focal adhesion kinase (FAK). Phosphorylation events occurring within focal adhesions influence numerous processes that include mitogenic signaling, cell survival and cell motility. FAK is a non-receptor tyrosine kinase that is ubiquitously expressed and highly conserved between species. FAK is recruited by integrin clusters and variably phosphorylated depending on the effector molecules present in the focal adhesion. Phosphorylation of FAK Tyr 397 decreases during serum starvation, contact inhibition and cell cycle arrest, all conditions under which activating FAK Tyr 407 phosphorylation increases.

## REFERENCES

- Schaller, M.D., et al. 1992. pp125 FAK, a structurally distinctive protein-tyrosine kinase associated with focal adhesions. *Proc. Natl. Acad. Sci. USA* 89: 5192-5196.
- Hanks, S.K., et al. 1992. Focal adhesion protein-tyrosine kinase phosphorylated in response to cell attachment to Fibronectin. *Proc. Natl. Acad. Sci. USA* 89: 8487-8491.
- Lipfert, L., et al. 1992. Integrin-dependent phosphorylation of the protein tyrosine kinase pp125 FAK in platelets. *J. Cell Biol.* 119: 905-912.
- Guan, J.L., et al. 1992. Regulation of focal adhesion-associated protein tyrosine kinase by both cellular adhesion and oncogenic transformation. *Nature* 359: 690-692.
- Schaller, M.D., et al. 1994. Autophosphorylation of the focal adhesion-associated protein tyrosine kinase, pp125 FAK, directs SH2-dependent binding of pp60Src. *Mol. Cell. Biol.* 14: 1680-1688.

## CHROMOSOMAL LOCATION

Genetic locus: PTK2 (human) mapping to 8q24.3; Ptk2 (mouse) mapping to 15 D3.

## SOURCE

p-FAK (Tyr 925) is a rabbit polyclonal antibody raised against a short amino acid sequence containing phosphorylated Tyr 925 of FAK of human origin.

## PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## APPLICATIONS

p-FAK (Tyr 925) is recommended for detection of Tyr 925 phosphorylated FAK of human origin, correspondingly phosphorylated Tyr 963 of mouse origin and correspondingly phosphorylated Tyr 928 of rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1–2 µg per 100–500 µg of total protein (1 ml of cell lysate)].

Suitable for use as control antibody for FAK siRNA (h): sc-29310, FAK siRNA (m): sc-35353, FAK shRNA Plasmid (h): sc-29310-SH, FAK shRNA Plasmid (m): sc-35353-SH, FAK shRNA (h) Lentiviral Particles: sc-29310-V and FAK shRNA (m) Lentiviral Particles: sc-35353-V.

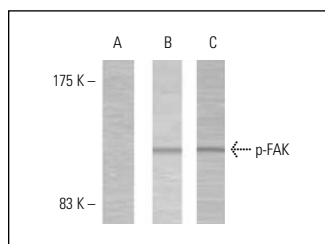
Molecular Weight of p-FAK: 125 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, serum treated HeLa whole cell lysate or EGF + serum + 293 whole cell lysate.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto B Blocking Reagent: sc-2335 (use 50 mM NaF, sc-24988, as diluent) and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

## DATA



Western blot analysis of phosphorylated FAK expression in Hep G2 (A, B) and serum-treated 293 (C) whole cell lysates. Blots were probed with p-FAK (Tyr 925): sc-101680 preincubated with cognate phosphorylated peptide (A) and p-FAK (Tyr 925): sc-101680 (B, C, D).

## SELECT PRODUCT CITATIONS

- Criswell, T. 2005. Delayed activation of insulin-like growth factor-1 receptor/Src/MAPK/Egr-1 signaling regulates clusterin expression, a pro-survival factor. *J. Biol. Chem.* 280: 14212-14221.
- Parri, M., et al. 2007. EphrinA1 activates a Src/focal adhesion kinase-mediated motility response leading to rho-dependent actino/myosin contractility. *J. Biol. Chem.* 282: 19619-19628.
- Lappas, M., et al. 2009. Localisation and expression of FoxO1 proteins in human gestational tissues. *Placenta* 30: 256-262.
- Zuo, H., et al. 2009. CD151 gene delivery after myocardial infarction promotes functional neovascularization and activates FAK signaling. *Mol. Med.* 15: 307-315.