SANTA CRUZ BIOTECHNOLOGY, INC.

p-FAK (Ser 722): sc-16662

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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.

CHROMOSOMAL LOCATION

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

SOURCE

p-FAK (Ser 722) is available as either goat (sc-16662) or rabbit (sc-16662-R) polyclonal affinity purified antibody raised against a short amino acid sequence containing Ser 722 phosphorylated focal adhesion kinase (FAK) of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-16662 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

p-FAK (Ser 722) is recommended for detection of Ser 722 phosphorylated FAK of mouse, rat, human, *Xenopus laevis* and zebrafish origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

p-FAK (Ser 722) is also recommended for detection of correspondingly phosphorylated FAK in additional species, including equine, canine, bovine and avian.

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.

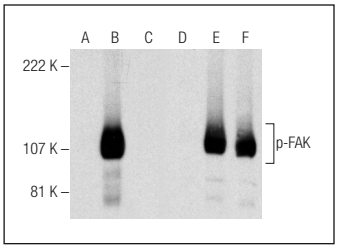
Molecular Weight of p-FAK: 125 kDa.

Positive Controls: FAK (h2): 293T Lysate: sc-171032, Hep G2 cell lysate: sc-2227 or HeLa whole cell lysate: sc-2200.

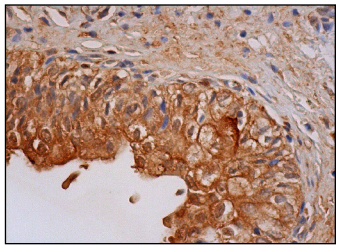
STORAGE

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

DATA



Western blot analysis of FAK phosphorylation in non-transfected: sc-117752 (**A**,**D**), untreated human FAK transfected: sc-114600 (**B**,**E**) and lambda protein phosphatase (sc-200312A) treated human FAK transfected: sc-114600 (**C**,**F**) 293T whole cell lysates. Antibodies tested include p-FAK (Ser 722)-R: sc-16662-R (**A**,**B**,**C**) and FAK (C-903): sc-932 (**D**,**E**,**F**).



p-FAK (Ser 722): sc-16662. Immunoperoxidase staining of formalin fixed, paraffin-embedded human urinary bladder tissue showing cytoplasmic, membrane and nuclear staining of urothelial cells.

SELECT PRODUCT CITATIONS

1. Ragolia, L., et al. 2005. Accelerated glucose intolerance, nephropathy, and atherosclerosis in prostaglandin D2 synthase knock-out mice. J. Biol. Chem. 280: 29946-29955.
2. Piccolella, M., et al. 2008. suPAR, a soluble form of urokinase plasminogen activator receptor, inhibits human prostate cancer cell growth and invasion. Int. J. Oncol. 32: 185-191.
3. Zhang, X., et al. 2009. β1 integrin is necessary for ureteric bud branching morphogenesis and maintenance of collecting duct structural integrity. Development 136: 3357-3366.
4. Smeeton, J., et al. 2010. Integrin-linked kinase regulates p38 MAPK-dependent cell cycle arrest in ureteric bud development. Development 137: 3233-3243.
5. Lee, Y.H., et al. 2010. Enhancement of osteoblast biocompatibility on titanium surface with terrein treatment. Cell Biochem. Funct. 28: 678-685.
6. Hong, S.Y., et al. 2010. Activation of RhoA and FAK induces ERK-mediated osteopontin expression in mechanical force-subjected periodontal ligament fibroblasts. Mol. Cell. Biochem. 335: 263-272.

RESEARCH USE

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