

p-paxillin (Tyr 118): sc-14036

BACKGROUND

The effects of some oncogenes, growth factors and neuropeptides are mediated by tyrosine phosphorylation of focal adhesion kinase (FAK) and paxillin cytoskeletal proteins. A rapid increase in tyrosine phosphorylation of paxillin, FAK and Crk-associated substrate (CAS) are prominent early events triggered by many G protein-coupled receptors. In addition to G protein-coupled receptors, Angiotensin IV (Ang IV), protein kinase C and other proteins can also mediate the tyrosine phosphorylation of paxillin. Paxillin must bind FAK for maximal phosphorylation in response to cell adhesion. FAK may function to direct tyrosine phosphorylation of paxillin in the process of transformation by the Src oncogene. Tyrosine phosphorylated FAK and paxillin function to regulate the signaling mechanism of the rapid nongenomic action of dexamethasone on the actin cytoskeleton. In glomerular epithelial cells, TNF α induces substantial reorganization of Actin cytoskeleton and focal adhesions. TNF α also simultaneously mediates tyrosine phosphorylation of paxillin and FAK, which regulate actin polymerization and the formation of focal adhesions, and may be directly involved in the redistribution of Actin.

CHROMOSOMAL LOCATION

Genetic locus: PXN (human) mapping to 12q24.23.

SOURCE

p-paxillin (Tyr 118) is available as either goat (sc-14036) or rabbit (sc-14036-R) polyclonal affinity purified antibody raised against a short amino acid sequence containing Tyr 118 phosphorylated paxillin of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-14036 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

p-paxillin (Tyr 118) is recommended for detection of Tyr 118 phosphorylated paxillin of human and *Xenopus laevis* origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (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-paxillin (Tyr 118) is also recommended for detection of correspondingly phosphorylated paxillin in additional species, including canine.

Suitable for use as control antibody for paxillin siRNA (h): sc-29439, paxillin shRNA Plasmid (h): sc-29439-SH and paxillin shRNA (h) Lentiviral Particles: sc-29439-V.

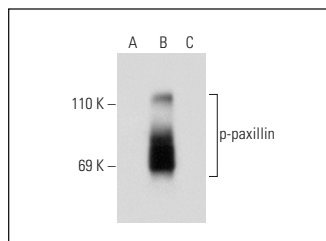
Molecular Weight of p-paxillin: 68 kDa.

Positive Controls: HeLa + serum-starved cell lysate: sc-24693 or A-431 whole cell lysate: sc-2201.

STORAGE

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

DATA



p-paxillin (Tyr 118)-R: sc-14036-R. Western blot analysis of paxillin phosphorylation in untreated (A), pervanadate treated (B) and pervanadate and lambda protein phosphatase (sc-200312A) treated (C) A-431 whole cell lysates.

SELECT PRODUCT CITATIONS

- Hopkins, A.M., et al. 2003. Constitutive activation of Rho proteins by CNF-1 influences tight junction structure and epithelial barrier function. *J. Cell Sci.* 116: 725-742.
- Gratzinger, D., et al. 2003. Platelet endothelial cell adhesion molecule-1 modulates endothelial cell motility through the small G-protein Rho. *FASEB J.* 17: 1458-1469.
- Madan, R., et al. 2006. Focal adhesion proteins as markers of malignant transformation and prognostic indicators in breast carcinoma. *Hum. Pathol.* 37: 9-15.
- Stabile, H., et al. 2007. Bone morphogenic protein antagonist Drg/gremlin is a novel proangiogenic factor. *Blood* 109: 1834-1840.
- Ohkawa, Y., et al. 2010. Ganglioside GD3 enhances adhesion signals and augments malignant properties of melanoma cells by recruiting integrins to glycolipid-enriched microdomains. *J. Biol. Chem.* 285: 27213-27223.
- Pan, X., et al. 2011. Activation of focal adhesion kinase enhances the adhesion of *Fusarium solani* to human corneal epithelial cells via the tyrosine-specific protein kinase signaling pathway. *Mol. Vis.* 17: 638-646.

RESEARCH USE

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



Try **p-paxillin (A-5): sc-365020** or **p-paxillin (D-10): sc-271980**, our highly recommended monoclonal alternatives to p-paxillin (Tyr 118).