

# p-paxillin (A-5): sc-365020

## 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 $\alpha$  induces substantial reorganization of Actin cytoskeleton and focal adhesions. TNF $\alpha$  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; Pxn (mouse) mapping to 5 F.

## SOURCE

p-paxillin (A-5) is a mouse monoclonal antibody epitope corresponding to a short amino acid sequence containing phosphorylated Tyr 118 of paxillin of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>2b</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

p-paxillin (A-5) is available conjugated to agarose (sc-365020 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-365020 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365020 PE), fluorescein (sc-365020 FITC), Alexa Fluor® 488 (sc-365020 AF488), Alexa Fluor® 546 (sc-365020 AF546), Alexa Fluor® 594 (sc-365020 AF594) or Alexa Fluor® 647 (sc-365020 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-365020 AF680) or Alexa Fluor® 790 (sc-365020 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-365020 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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## STORAGE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.

## APPLICATIONS

p-paxillin (A-5) is recommended for detection of Tyr 118 phosphorylated paxillin of mouse, rat, human and avian origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ 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).

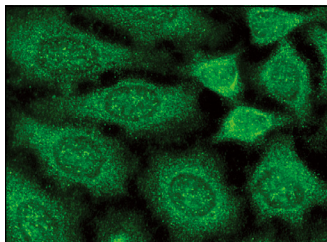
p-paxillin (A-5) is also recommended for detection of Tyr 118 phosphorylated paxillin in additional species, including canine.

Suitable for use as control antibody for paxillin siRNA (h): sc-29439, paxillin siRNA (m): sc-36197, paxillin shRNA Plasmid (h): sc-29439-SH, paxillin shRNA Plasmid (m): sc-36197-SH, paxillin shRNA (h) Lentiviral Particles: sc-29439-V and paxillin shRNA (m) Lentiviral Particles: sc-36197-V.

Molecular Weight of p-paxillin: 68 kDa.

Positive Controls: HeLa + serum-starved cell lysate: sc-24693.

## DATA



p-paxillin (A-5): sc-365020. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

## SELECT PRODUCT CITATIONS

- Jiang, W.G., et al. 2012. Inhibitory effects of Yangzheng Xiaojing on angiogenesis and the role of the focal adhesion kinase pathway. *Int. J. Oncol.* 41: 1635-1642.
- Jiang, W.G., et al. 2013. Antitumour effects of Yangzheng Xiaojing in human osteosarcoma: the pivotal role of focal adhesion kinase signalling. *Oncol. Rep.* 30: 1405-1413.
- Sanchez, A.M., et al. 2016. Retinoic acid induces nuclear FAK translocation and reduces breast cancer cell adhesion through Moesin, FAK, and paxillin. *Mol. Cell. Endocrinol.* 430: 1-11.
- Shortrede, J.E., et al. 2018. Ulipristal acetate interferes with Actin remodeling induced by 17 $\beta$ -estradiol and progesterone in human endometrial stromal cells. *Front. Endocrinol.* 9: 350.
- Zhao, H., et al. 2019. DOK7V1 influences the malignant phenotype of lung cancer cells through PI3K/Akt/mTOR and FAK/paxillin signaling pathways. *Int. J. Oncol.* 54: 381-389.

## RESEARCH USE

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