

paxillin (A-5): sc-390738



The Power to Question

BACKGROUND

Paxillin is a focal adhesion phosphoprotein that is localized to the cytoskeleton. Phosphorylation of paxillin has been shown to occur in response to PDGF treatment, v-Src transformation or cross-linking of integrins. FAK (focal adhesion kinase) and PYK2 have been shown to phosphorylate paxillin. FAK phosphorylates paxillin specifically on Tyr 118 *in vitro*. However, FAK phosphorylation does not seem to be required for the recruitment of paxillin to cell adhesion sites. Paxillin may play a role in signal transduction, regulation of cell morphology and the recruitment of structural and signaling molecules to focal adhesions. It has been shown that the amount of paxillin is reduced in mitotic cells by proteolytic downregulation and that paxillin is alternatively phosphorylated on serine rather than on tyrosine and serine during mitosis.

REFERENCES

- Graham, I.L., et al. 1994. Complement receptor 3 (CR3, Mac-1, integrin $\alpha M\beta 2$, CD11b/CD18) is a required for tyrosine phosphorylation of paxillin in adherent and nonadherent neutrophils. *J. Cell Biol.* 127: 1139-1147.
- Salgia, R., et al. 1995. Molecular cloning of human paxillin, a focal adhesion protein phosphorylated by P210^{Bcr/Abl}. *J. Biol. Chem.* 270: 5039-5047.
- Bellis, S.L., et al. 1995. Characterization of tyrosine phosphorylation of paxillin *in vitro* by focal adhesion kinase. *J. Biol. Chem.* 270: 17437-17441.
- Brown, M.C., et al. 1996. Identification of LIM3 as the principal determinant of paxillin focal adhesion localization and characterization of a novel motif on paxillin directing vinculin and focal adhesion kinase binding. *J. Cell Biol.* 135: 1109-1123.
- Leventhal, P.S., et al. 1996. Tyrosine phosphorylation and enhanced expression of paxillin during neuronal differentiation *in vitro*. *J. Biol. Chem.* 271: 5957-5960.

CHROMOSOMAL LOCATION

Genetic locus: PXN (human) mapping to 12q24.23; Pxn (mouse) mapping to 5 F.

SOURCE

paxillin (A-5) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 59-72 of paxillin of human origin.

PRODUCT

Each vial contains 200 μ g IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-390738 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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

paxillin (A-5) is recommended for detection of α , β and γ isoforms paxillin of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

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.

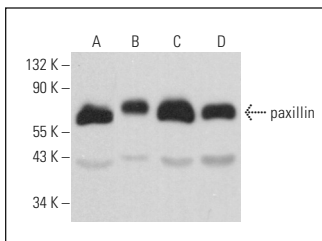
Molecular Weight of paxillin: 68 kDa.

Positive Controls: RAW 264.7 whole cell lysate: sc-2211, A-10 cell lysate: sc-3806 or HeLa whole cell lysate: sc-2200.

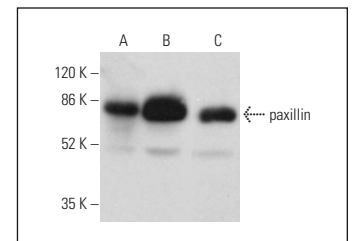
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



paxillin (A-5): sc-390738. Western blot analysis of paxillin expression in HeLa (A), 3T3-L1 (B), RAW 264.7 (C) and A-10 (D) whole cell lysates.



paxillin (A-5): sc-390738. Western blot analysis of paxillin expression in HeLa (A), HUV-EC-C (B) and c4 (C) whole cell lysates.

SELECT PRODUCT CITATIONS

- Huang, F., et al. 2018. Thapsigargin induces apoptosis of prostate cancer through cofilin-1 and paxillin. *Oncol. Lett.* 16: 1975-1980.
- Manceau, L., et al. 2022. Divergent transcriptional and transforming properties of PAX3-FOXO1 and PAX7-FOXO1 paralogs. *PLoS Genet.* 18: e1009782.

See **paxillin (B-2): sc-365379** for paxillin antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.