

# $\gamma$ -parvin (C-5): sc-390388



The Power to Question

## BACKGROUND

The parvin family, including  $\alpha$ -parvin,  $\beta$ -parvin and  $\gamma$ -parvin, link integrins and associated proteins with intracellular pathways, which regulate actin cytoskeletal dynamics and cell survival. All three family members localize to focal adhesions and function in cell adhesion, spreading, motility and survival through interactions with partners, such as integrin-linked kinase (ILK), paxillin,  $\alpha$ -actinin and testicular kinase 1.  $\alpha$ -parvin is widely expressed, with highest levels detected in the skeletal muscle, heart, liver and kidney. A complex made up of  $\alpha$ -parvin, ILK and the LIM protein PINCH-1 is critical for cell survival in a variety of cells, including certain cancer cells, kidney podocytes and cardiac myocytes.  $\beta$ -parvin links initial integrin signals to rapid actin reorganization, thereby playing a critical role in fibroblast migration. The ILK- $\gamma$ -parvin complex is essential for the establishment of cell polarity required for leukocyte migration.

## REFERENCES

1. Olski, T.M., et al. 2001. Parvin, a 42 kDa focal adhesion protein, related to the  $\alpha$ -actinin superfamily. *J. Cell Sci.* 114: 525-538.
2. Korenbaum, E., et al. 2001. Genomic organization and expression profile of the parvin family of focal adhesion proteins in mice and humans. *Gene* 279: 69-79.
3. Aboulaich, N., et al. 2004. Vectorial proteomics reveal targeting, of polymerase I and transcript release factor (PTRF) at the surface of caveolae in human adipocytes. *Biochem. J.* 383: 237-248.
4. Yamaji, S., et al. 2004. Affixin interacts with  $\alpha$ -actinin and mediates integrin signaling for reorganization of F-Actin induced by initial cell-substrate interaction. *J. Cell Biol.* 165: 539-551.
5. Zhang, Y., et al. 2004. Distinct roles of two structurally closely related focal adhesion proteins,  $\alpha$ -parvins and  $\beta$ -parvins, in regulation of cell morphology and survival. *J. Biol. Chem.* 279: 41695-41705.
6. Filipenko, N.R., et al. 2005. Integrin-linked kinase activity regulates Rac- and Cdc42-mediated actin cytoskeleton reorganization via  $\alpha$ -PIX. *Oncogene* 24: 5837-5849.
7. Matsuda, C., et al. 2005. Dysferlin interacts with affixin ( $\beta$ -parvin) at the sarcolemma. *J. Neuropathol. Exp. Neurol.* 64: 334-340.
8. Chen, H., et al. 2005. Role of the integrin-linked kinase/PINCH1/ $\alpha$ -parvin complex in cardiac myocyte hypertrophy. *Lab. Invest.* 85: 1342-1356.
9. Yang, Y., et al. 2005. Formation and phosphorylation of the PINCH-1-integrin linked kinase- $\alpha$ -parvin complex are important for regulation of renal glomerular podocyte adhesion, architecture, and survival. *J. Am. Soc. Nephrol.* 16: 1966-1976.

## CHROMOSOMAL LOCATION

Genetic locus: PARVG (human) mapping to 22q13.31; Parvg (mouse) mapping to 15 E2.

## SOURCE

$\gamma$ -parvin (C-5) is a mouse monoclonal antibody raised against amino acids 1-141 mapping at the N-terminus of  $\gamma$ -parvin of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

$\gamma$ -parvin (C-5) is recommended for detection of  $\gamma$ -parvin of mouse, rat and human 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).

Suitable for use as control antibody for  $\gamma$ -parvin siRNA (h): sc-61302,  $\gamma$ -parvin siRNA (m): sc-61304,  $\gamma$ -parvin shRNA Plasmid (h): sc-61302-SH,  $\gamma$ -parvin shRNA Plasmid (m): sc-61304-SH,  $\gamma$ -parvin shRNA (h) Lentiviral Particles: sc-61302-V and  $\gamma$ -parvin shRNA (m) Lentiviral Particles: sc-61304-V.

Molecular Weight of  $\gamma$ -parvin: 37 kDa.

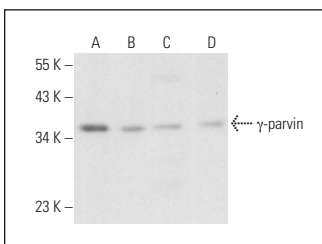
Positive Controls: HL-60 whole cell lysate: sc-2209, THP-1 cell lysate: sc-2238 or SP2/0 whole cell lysate: sc-364795.

## RECOMMENDED SUPPORT REAGENTS

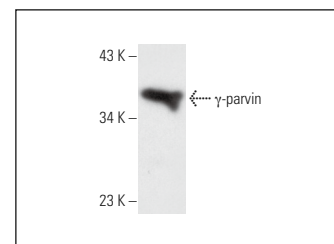
To ensure optimal results, the following support reagents are recommended:

- 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  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 $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  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



$\gamma$ -parvin (C-5): sc-390388. Western blot analysis of  $\gamma$ -parvin expression in THP-1 (A), ALL-SIL (B), SP2/0 (C) and RAW 264.7 (D) whole cell lysates.



$\gamma$ -parvin (D-6): sc-390388. Western blot analysis of  $\gamma$ -parvin expression in HL-60 whole cell lysate.

## 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.