

# β-parvin (D-2): sc-374581

## BACKGROUND

The parvin family, including α-parvin, β-parvin and γ-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, α-actinin and testicular kinase 1. α-parvin is widely expressed, with highest levels detected in the skeletal muscle, heart, liver and kidney. A complex made up of α-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. β-parvin links initial integrin signals to rapid Actin reorganization, thereby playing a critical role in fibroblast migration. The ILK-γ-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 α-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 α-actinin and mediates integrin signaling for reorganization of F-Actin induced by initial cell-substrate interaction. *J. Cell Biol.* 165: 539-551.

## CHROMOSOMAL LOCATION

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

## SOURCE

β-parvin (D-2) is a mouse monoclonal antibody raised against amino acids 197-241 mapping within an internal region of β-parvin of human origin.

## PRODUCT

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

β-parvin (D-2) is available conjugated to agarose (sc-374581 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-374581 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-374581 PE), fluorescein (sc-374581 FITC), Alexa Fluor® 488 (sc-374581 AF488), Alexa Fluor® 546 (sc-374581 AF546), Alexa Fluor® 594 (sc-374581 AF594) or Alexa Fluor® 647 (sc-374581 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-374581 AF680) or Alexa Fluor® 790 (sc-374581 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## APPLICATIONS

β-parvin (D-2) is recommended for detection of β-parvin of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for β-parvin siRNA (h): sc-61301, β-parvin siRNA (m): sc-61303, β-parvin shRNA Plasmid (h): sc-61301-SH, β-parvin shRNA Plasmid (m): sc-61303-SH, β-parvin shRNA (h) Lentiviral Particles: sc-61301-V and β-parvin shRNA (m) Lentiviral Particles: sc-61303-V.

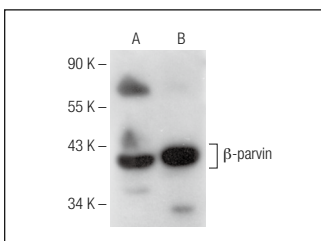
Molecular Weight of β-parvin: 42 kDa.

Positive Controls: human skeletal muscle extract: sc-363776, mouse liver extract: sc-2256 or human liver extract: sc-363766.

## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ 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



β-parvin (D-2): sc-374581. Western blot analysis of β-parvin expression in human skeletal muscle (A) and human liver (B) tissue extracts.

## SELECT PRODUCT CITATIONS

1. Liu, R., et al. 2024. Inhibition of the ILK-AKT pathway by upregulation of PARVB contributes to the cochlear cell death in Fascin2 gene knockout mice. *Cell Death Discov.* 10: 89.

## 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.