

α -Parvin Antibody

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For Research Use Only. Not For Use In Diagnostic Procedures.

Applications	Species Cross-Reactivity*	Molecular Wt.	Source
W, IF-IC Endogenous	H, M, R, Mk, Hm, Dg	43 kDa	Rabbit**

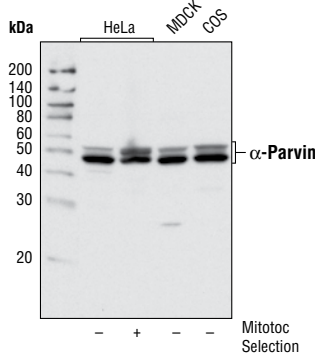
Background: The extracellular matrix (ECM) is a complex structure of secreted macromolecules surrounding mammalian organs and tissues. Controlled interactions between cells and the ECM are important in proliferation, migration, survival, polarity and differentiation. Cells contact the ECM primarily through heterodimeric integral membrane proteins called integrins. Integrins connect the ECM to the cytoskeleton, and therefore the cell signaling machinery, through protein complexes called focal adhesions (1).

The ILK/PINCH/Parvin (IPP) complex is composed of three highly conserved proteins recruited to sites of ECM contact as pre-assembled structures. The IPP acts at the interface of the integrin/actin connection to regulate formation of focal adhesions and integrin signaling. All three proteins contain multiple protein binding domains allowing them to function as adaptor proteins in the formation of focal adhesions. ILK (integrin-linked kinase) also has a catalytic (protein Ser/Thr kinase) domain, but may or may not function as a kinase *in vivo*. Roles for IPP proteins outside of the IPP complex have been proposed, including regulation of gene expression (2,3).

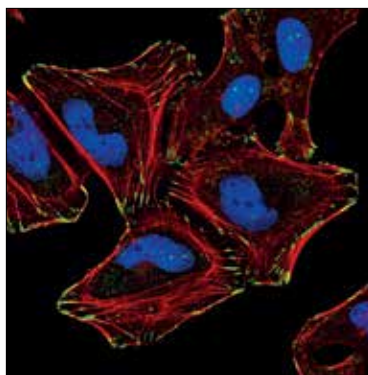
The parvin family consists of 3 members, α -parvin/actopaxin, β -parvin/affixin and γ -parvin. α -parvin and β -parvin are expressed ubiquitously, while expression of γ -parvin is restricted to haematopoietic cells (4). α -parvin binds to F-actin both directly and via interaction with the focal adhesion protein paxillin (5). α -parvin regulates cell spreading and motility through interactions with the cofilin kinase TESK1 (6), and with the GTPase activating protein CdGAP (7). Phosphorylation of α -parvin during mitosis may have a role in the regulation of actin dynamics during the cell cycle (8).

Specificity/Sensitivity: α -Parvin Antibody detects endogenous levels of total α -parvin protein.

Source/Purification: Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues near the amino terminus of human α -parvin. Antibodies are purified by peptide affinity chromatography.



Western blot analysis of extracts from various cell types using α -Parvin Antibody. In lane 2, HeLa cells were isolated in mitosis by mitotic shake-off following nocodazole treatment (100 ng/mL for 4 hours).



Confocal immunofluorescent analysis of HeLa cells using α -Parvin Antibody (green). Actin filaments have been labeled with DyLight™ 554 Phalloidin #13054 (red). Blue pseudocolor = DRAQ5® #4084 (fluorescent DNA dye).

Entrez-Gene ID # 55742
UniProt ID # Q9NVD7

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 μ g/ml BSA and 50% glycerol. Store at -20°C. Do not aliquot the antibody.

*Species cross-reactivity is determined by western blot.

**Anti-rabbit secondary antibodies must be used to detect this antibody.

Recommended Antibody Dilutions:

Western blotting 1:1000
Immunofluorescence (IF-IC) 1:400

Background References:

- (1) Burridge, K. et al. (1988) *Annu Rev Cell Biol* 4, 487–525.
- (2) Legate, K.R. et al. (2006) *Nat Rev Mol Cell Biol* 7, 20–31.
- (3) Wu, C. (2004) *Biochim Biophys Acta* 1692, 55–62.
- (4) Korenbaum, E. et al. (2001) *Gene* 279, 69–79.
- (5) Nikolopoulos, S.N. and Turner, C.E. (2000) *J Cell Biol* 151, 1435–48.
- (6) LaLonde, D.P. et al. (2005) *J Biol Chem* 280, 21680–8.
- (7) LaLonde, D.P. et al. (2006) *Curr Biol* 16, 1375–85.
- (8) Curtis, M. et al. (2002) *Biochem J* 363, 233–42.

For application specific protocols please see the web page for this product at www.cellsignal.com.

Please visit www.cellsignal.com for a complete listing of recommended companion products.

IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween®20 at 4°C with gentle shaking, overnight.

Applications Key: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA—Peptide

Species Cross-Reactivity Key: H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine Dg—dog Pg—pig Sc—S. cerevisiae Ce—C. elegans Hr—horse All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.