Revision 1

Store at -20C

#4026

α-Parvin Antibody

Cell Signaling TECHNOLOGY®

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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IF-IC	H M R Hm Mk Dg	Endogenous	43	Rabbit	#Q9NVD7	55742

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Immunofluorescence (Immunocytochemistry)	1:400

Storage

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

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.

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, and 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 hematopoietic 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).

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.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

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

Applications Key

W: Western Blotting **IF-IC:** Immunofluorescence (Immunocytochemistry)

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat **Hm:** Hamster **Mk:** Monkey **Dg:** Dog

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