

CLP36 (H-11): sc-374077



The Power to Question

BACKGROUND

CLP36, also known as PDLIM1, CLIM1 or Elfin, is a 329 amino acid cytoplasmic protein that associates with Actin stress fibers at the cytoskeleton. Expressed at high levels in skeletal muscle and heart and at lower levels in colon, small intestine, spleen, lung, placenta, kidney, liver, thymus and pancreas, CLP36 functions as a cytoskeletal protein that is thought to act as an adaptor, bringing target proteins to the cytoskeleton. Specifically, CLP36 interacts with Clik1 (α kinase) and recruits Clik1 to α -actinin-1, thereby facilitating the association of Clik1 with Actin stress fibers. CLP36 contains one PDZ domain and one LIM zinc-binding domain through which it conveys its protein-protein binding capabilities. Human CLP36 shares 88% sequence similarity with its rat counterpart, suggesting a conserved function between species.

REFERENCES

- Bauer, K., et al. 2000. Human CLP36, a PDZ-domain and LIM-domain protein, binds to α -actinin-1 and associates with Actin filaments and stress fibers in activated platelets and endothelial cells. *Blood* 96: 4236-4245.
- Vallenius, T., et al. 2000. CLP-36 PDZ-LIM protein associates with nonmuscle α -actinin-1 and α -actinin-4. *J. Biol. Chem.* 275: 11100-11105.
- Kotaka, M., et al. 2000. Interaction of hCLIM1, an enigma family protein, with α -actinin 2. *J. Cell. Biochem.* 78: 558-565.
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- Miehe, U., et al. 2006. Expression of the Actin stress fiber-associated protein CLP36 in the human placenta. *Histochem. Cell Biol.* 126: 465-471.
- Tran, Y.H., et al. 2006. Spliced isoforms of LIM-domain-binding protein (CLIM/NLI/Ldb) lacking the LIM-interaction domain. *J. Biochem.* 140: 105-119.
- Kashani, A.H., et al. 2006. Calcium activation of the LMO4 transcription complex and its role in the patterning of thalamocortical connections. *J. Neurosci.* 26: 8398-8408.

CHROMOSOMAL LOCATION

Genetic locus: PDLIM1 (human) mapping to 10q23.33; Pdlim1 (mouse) mapping to 19 C3.

SOURCE

CLP36 (H-11) is a mouse monoclonal antibody raised against amino acids 1-184 mapping at the N-terminus of CLP36 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.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

CLP36 (H-11) is recommended for detection of CLP36 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), immunohistochemistry (including paraffin-embedded sections) (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 CLP36 siRNA (h): sc-72927, CLP36 siRNA (m): sc-72928, CLP36 shRNA Plasmid (h): sc-72927-SH, CLP36 shRNA Plasmid (m): sc-72928-SH, CLP36 shRNA (h) Lentiviral Particles: sc-72927-V and CLP36 shRNA (m) Lentiviral Particles: sc-72928-V.

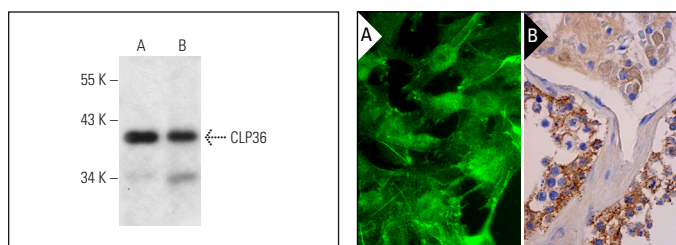
Molecular Weight of CLP36: 36 kDa.

Positive Controls: human heart extract: sc-363763, HeLa whole cell lysate: sc-2200 or Jurkat whole cell lysate: sc-2204.

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. 4) Immunohistochemistry: use m-IgG κ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



CLP36 (H-11): sc-374077. Western blot analysis of CLP36 expression in HeLa whole cell lysate (A) and human heart tissue extract (B).

CLP36 (H-11): sc-374077. Immunofluorescence staining of formalin-fixed Hep G2 cells showing cytoskeletal localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human testis tissue showing cytoplasmic staining of cells in seminiferous ducts and Leydig cells (B).

SELECT PRODUCT CITATIONS

- Qiu, C., et al. 2021. Serum anti-PDLIM1 autoantibody as diagnostic marker in ovarian cancer. *Front. Immunol.* 12: 698312.

RESEARCH USE

For research use only, not for use in diagnostic procedures.