SANTA CRUZ BIOTECHNOLOGY, INC.

ALP (C-8): sc-373737



BACKGROUND

ALP (actinin-associated LIM protein), also known as PDLIM3 (PDZ and LIM domain protein 3) is a 364 amino acid protein that contains one LIM zinc-binding domain and one PDZ domain and localizes to the cytoplasm, as well as to myofiber Z-lines. Existing as three alternatively spliced isoforms, two of which exhibit tissue-specific expression in skeletal muscle and heart, ALP interacts with α -actinin-2 and, via this interaction, is thought to play a role in Actin filament organization, specifically regulating the association of Actin filaments arrays with muscle cells. The gene encoding ALP maps to a region on human chromosome 4 that is associated with facioscapulohumeral muscular dystrophy, suggesting that defects in the ALP gene may be involved in the pathogenesis of muscular dystrophy.

REFERENCES

- Piétu, G., et al. 1996. Novel gene transcripts preferentially expressed in human muscles revealed by quantitative hybridization of a high density cDNA array. Genome Res. 6: 492-503.
- Xia, H., et al. 1997. Actinin-associated LIM protein: identification of a domain interaction between PDZ and spectrin-like repeat motifs. J. Cell Biol. 139: 507-515.

CHROMOSOMAL LOCATION

Genetic locus: PDLIM3 (human) mapping to 4q35.1.

SOURCE

ALP (C-8) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 71-101 within an internal region of ALP of human origin.

PRODUCT

Each vial contains 200 $\mu g\, lg G_1$ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-373737 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

RESEARCH USE

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

APPLICATIONS

ALP (C-8) is recommended for detection of ALP of 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for ALP siRNA (h): sc-72485, ALP shRNA Plasmid (h): sc-72485-SH and ALP shRNA (h) Lentiviral Particles: sc-72485-V.

Molecular Weight of ALP: 39 kDa.

Positive Controls: ALP (h): 293T Lysate: sc-114160 or human skeletal muscle extract: sc-363776.

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





ALP (C-8): sc-373737. Western blot analysis of ALP expression in non-transfected: sc-117752 (**A**) and human ALP transfected: sc-114160 (**B**) 293T whole cell lysates.

ALP (C-8): sc-373737. Western blot analysis of ALP expression in human skeletal muscle tissue extract.

SELECT PRODUCT CITATIONS

- Thakor, D.K., et al. 2018. Establishing an organotypic system for investigating multimodal neural repair effects of human mesenchymal stromal stem cells. Curr. Protoc. Stem Cell Biol. 47: e58.
- Qian, Z.J., et al. 2018. Cellular properties of the fermented microalgae Pavlova lutheri and its isolated active peptide in osteoblastic differentiation of MG-63 cells. Mol. Med. Rep. 17: 2044-2050.
- Liu, L., et al. 2018. Injectable alendronate-functionalized GeIMA hydrogels for mineralization and osteogenesis. RSC Adv. 8: 22764-22776.
- 4. Tian, S., et al. 2019. Concentrated growth factor promotes dental pulp cells proliferation and mineralization and facilitates recovery of dental pulp tissue. Med. Sci. Monit. 25: 10016-10028.
- Chen, J., et al. 2020. On-demand storage and release of antimicrobial peptides using Pandora's box-like nanotubes gated with a bacterial infection-responsive polymer. Theranostics 10: 109-122.
- Liu, L., et al. 2020. Phosphorylated chitosan hydrogels inducing osteogenic differentiation of osteoblasts via JNK and p38 signaling pathways. ACS Biomater. Sci. Eng. 6: 1500-1509.
- Tang, Q., et al. 2020. Fabrication of a hydroxyapatite-PDMS microfluidic chip for bone-related cell culture and drug screening. Bioact. Mater. 6: 169-178.

STORAGE

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