

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 4q35.1 that is associated with facioscapulohumeral muscular dystrophy, suggesting that defects in the ALP gene may be involved in the pathogenesis of muscular dystrophy.

REFERENCES

1. 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.
2. 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 μ g IgG₁ 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.

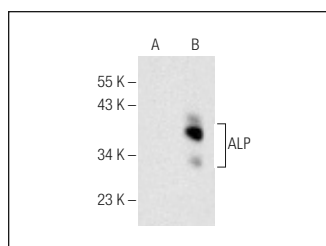
Molecular Weight of ALP: 39 kDa.

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

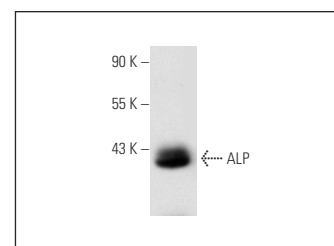
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-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.

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

1. 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.
2. 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.
3. 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.
4. 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.
5. 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.
6. Tang, Q., et al. 2021. 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.