

# Aciculin (14F8): sc-73613

## BACKGROUND

Aciculin, also known as PGM5 (phosphoglucomutase 5) or PGMRP, is a 567 amino acid protein that belongs to the phosphoglucomutase family of phosphotransferases, which play an important role in the interconversion of glucose-1-phosphate and glucose-6-phosphate. Localized to the cell junction and expressed at high levels in smooth and cardiac muscle, Aciculin binds magnesium as a cofactor and interacts with dystrophin and utrophin, possibly playing a role in cytoskeletal organization and function. Aciculin exists as two alternatively spliced isoforms and is encoded by a gene that maps to human chromosome 9, which houses over 900 genes and comprises nearly 4% of the human genome.

## CHROMOSOMAL LOCATION

Genetic locus: PGM5 (human) mapping to 9q21.11; Pgm5 (mouse) mapping to 19 B.

## SOURCE

Aciculin (14F8) is a mouse monoclonal antibody raised against Aciculin of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Aciculin (14F8) is available conjugated to agarose (sc-73613 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-73613 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-73613 PE), fluorescein (sc-73613 FITC), Alexa Fluor<sup>®</sup> 488 (sc-73613 AF488), Alexa Fluor<sup>®</sup> 546 (sc-73613 AF546), Alexa Fluor<sup>®</sup> 594 (sc-73613 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-73613 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-73613 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-73613 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

## STORAGE

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

## APPLICATIONS

Aciculin (14F8) is recommended for detection of Aciculin of mouse, rat, human, bovine and avian origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500); non cross-reactive with phosphoglucomutase.

Suitable for use as control antibody for Aciculin siRNA (h): sc-72431, Aciculin siRNA (m): sc-72432, Aciculin shRNA Plasmid (h): sc-72431-SH, Aciculin shRNA Plasmid (m): sc-72432-SH, Aciculin shRNA (h) Lentiviral Particles: sc-72431-V and Aciculin shRNA (m) Lentiviral Particles: sc-72432-V.

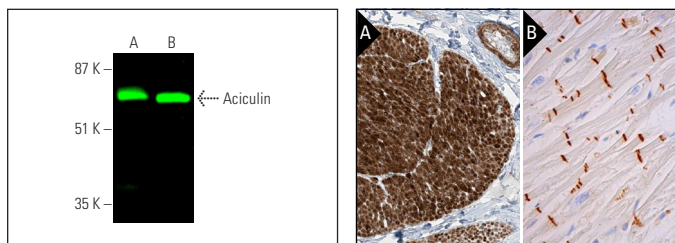
Molecular Weight of Aciculin: 56 kDa.

Positive Controls: A-10 cell lysate: sc-3806 or human heart extract: sc-363763.

## 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<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> 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<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

## DATA



Aciculin (14F8): sc-73613. Near-infrared western blot analysis of Aciculin expression in human heart tissue extract (A) and A-10 whole cell lysate (B). Blocked with UltraCruz<sup>®</sup> Blocking Reagent: sc-516214. Detection reagent used: m-IgGκ BP-CFL 680: sc-516180.

Aciculin (14F8): sc-73613. Immunoperoxidase staining of formalin fixed, paraffin-embedded human smooth muscle tissue showing cytoplasmic staining of human smooth muscle cells at high magnification. Kindly provided by The Swedish Human Protein Atlas (HPA) program (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human heart muscle tissue showing intercalated disc staining of myocytes (B).

## SELECT PRODUCT CITATIONS

- Nurminskaya, M., et al. 2014. Transglutaminase 2 promotes PDGF-mediated activation of PDGFR/Akt1 and β-catenin signaling in vascular smooth muscle cells and supports neointima formation. *J. Vasc. Res.* 51: 418-428.
- Dusart, P., et al. 2019. A systems-based map of human brain cell-type enriched genes and malignancy-associated endothelial changes. *Cell Rep.* 29: 1690-1706.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.

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