

Anti-Profilin 1/PFN1 Antibody Picoband™

Catalog Number: PB9313

About PFN1

Profilin-1 is a protein that in humans is encoded by the PFN1 gene. The protein encoded by this gene is a ubiquitous actin monomer-binding protein belonging to the profilin family. PFN1 is mapped to 17p13.2. At high concentrations, profilin prevents the polymerization of actin, whereas it enhances it at low concentrations. This gene is a 140-amino acid protein and major growth regulator of filamentous (F)-actin through its binding of monomeric (G)-actin. It is thought to regulate actin polymerization in response to extracellular signals. Deletion of this gene is associated with Miller-Dieker syndrome.

Overview

Product Name	Anti-Profilin 1/PFN1 Antibody Picoband™
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-Profilin 1/PFN1 Antibody Picoband™ catalog # PB9313. Tested in Flow Cytometry, IF, IHC, ICC, WB applications. This antibody reacts with Human, Mouse, Rat.
Application	Flow Cytometry, IF, IHC, ICC, WB
Clonality	Polyclonal
Formulation	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na ₂ HPO ₄ , 0.05mg NaN ₃ .
Storage Instructions	Store at -20°C for one year from date of receipt. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for six months. Avoid repeated freeze-thaw cycles.
Host	Rabbit
Uniprot ID	P07737

Technical Details

Immunogen	A synthetic peptide corresponding to a sequence at the C-terminus of human Profilin 1, identical to the related mouse and rat sequences.
Predicted Reactive Species	Hamster
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot, supported by SA1022 in IHC(P) and ICC.
Cross Reactivity	No cross-reactivity with other proteins
Isotype	Rabbit IgG
Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.

Purification	Immunogen affinity purified.
Suggested Dilutions	Dilute the sample so that the expected range of concentrations fall within the detection range of this kit. If the expected range of concentration is unknown, a pilot test should be conducted to decide the optimal dilution ratio for your samples. Some PubMed article(s) citing the expression level of this target are as follows: Boster Bio's internal QC testing used: Western blot, 0.1-0.5ug/ml, Human, Mouse, Rat Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml, Human, By Heat Immunocytochemistry/Immunofluorescence, 2ug/ml, Human Flow Cytometry, 1-3ug/1x10⁶ cells, Human

Anti-Profilin 1/PFN1 Antibody Picoband™ (PB9313) Images

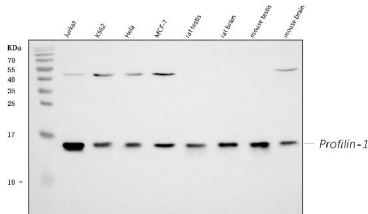


Figure 1. Western blot analysis of Profilin1 using anti-Profilin1 antibody (PB9313).

Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions.

Lane 1: human Jurkat whole cell lysates,

Lane 2: human K562 whole cell lysates,

Lane 3: human Hela whole cell lysates,

Lane 4: human MCF-7 whole cell lysates, Lane 5: rat testis tissue lysates,

Lane 6: rat brain tissue lysates,

Lane 7: mouse testis tissue lysates,

Lane 8: mouse brain tissue lysates.

After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-Profilin1 antigen affinity purified polyclonal antibody (Catalog # PB9313) at 0.5 ug/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for Profilin1 at approximately 15 kDa. The expected band size for Profilin1 is at 15 kDa.

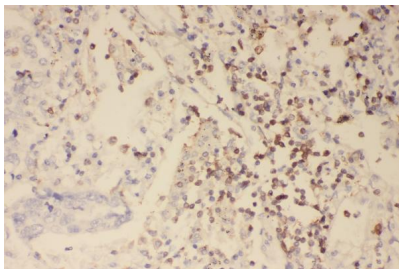


Figure 2. IHC analysis of Profilin 1 using anti-Profilin 1 antibody (PB9313).

Profilin 1 was detected in paraffin-embedded section of human lung cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-Profilin 1 Antibody (PB9313) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) (Catalog # SA1022) with DAB as the chromogen.

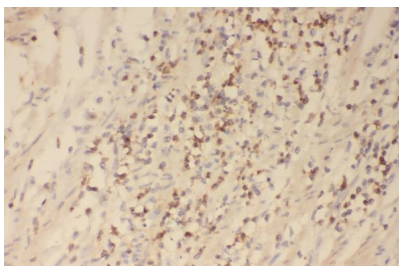


Figure 3. IHC analysis of Profilin 1 using anti-Profilin 1 antibody (PB9313).

Profilin 1 was detected in paraffin-embedded section of human intestinal cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-Profilin 1 Antibody (PB9313) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex

(SABC) (Catalog # SA1022) with DAB as the chromogen.

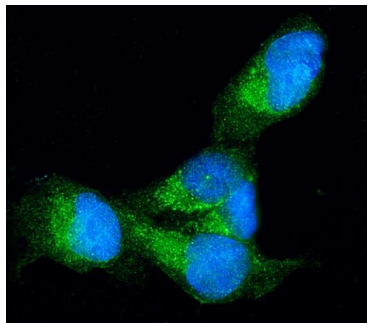


Figure 4. IF analysis of Profilin 1 using anti-Profilin 1 antibody (PB9313).

Profilin 1 was detected in immunocytochemical section of U2OS cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 2ug/mL rabbit anti-Profilin 1 Antibody (PB9313) overnight at 4°C. DyLight®488 Conjugated Goat Anti-Rabbit IgG (BA1127) was used as secondary antibody at 1:100 dilution and incubated for 30 minutes at 37°C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.

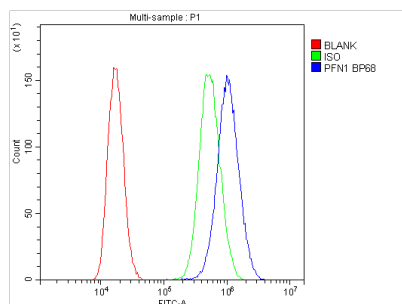


Figure 5. Flow Cytometry analysis of PC-3 cells using anti-Profilin1 antibody (PB9313).

Overlay histogram showing PC-3 cells stained with PB9313 (Blue line). The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-Profilin1 Antibody (PB9313, 1ug/1x10⁶ cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127, 5-10ug/1x10⁶ cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1ug/1x10⁶) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

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