

Profilin-1/2 (FL-140): sc-25788

BACKGROUND

Profilins regulate Actin polymerization by binding to and sequestering the Actin monomer. Profilins act as a nucleotide exchange factor that charges Actin with ATP after binding the Actin monomer through a 1:1 stoichiometric relationship. Human Profilin-1 and Profilin-2 are encoded by two separate genes mapping to chromosomes 17p13.2 and 3q25.1, respectively. Both Profilin-1 and Profilin-2 are abundantly expressed in kidney. Profilin-1 is highly expressed in lung, liver, placenta and kidney while Profilin-2 is highly expressed in brain and skeletal muscle. In axonal and dendritic processes of mouse brain, Profilins co-localize with Dynamin 1 and synapsin. Profilin may play a role in mediating cell adhesion. The overexpression of Profilin in endothelial cells results in increased adhesion to Fibronectin. In food allergy, plant Profilin is considered a pan allergen. Case studies indicate individuals with allergies to various foods including celery, carrots, zucchini and peanuts are actually sensitive to the Profilin proteins in these foods.

CHROMOSOMAL LOCATION

Genetic locus: PFN1 (human) mapping to 17p13.2, PFN2 (human) mapping to 3q25.1; Pfn1 (mouse) mapping to 11 B3, Pfn2 (mouse) mapping to 3 D.

SOURCE

Profilin-1/2 (FL-140) is a rabbit polyclonal antibody raised against amino acids 1-140 representing full length Profilin-1 of human origin.

PRODUCT

Each vial contains 200 µg IgG 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

Profilin-1/2 (FL-140) is recommended for detection of Profilin-1, and to a lesser extent, Profilin-2 of mouse, rat and human 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Profilin-1/2 (FL-140) is also recommended for detection of Profilin-1, and to a lesser extent, Profilin-2 in additional species, including equine, bovine and porcine.

Suitable for use as control antibody for Profilin-1/2 siRNA (h): sc-44045, Profilin-1/2 shRNA Plasmid (h): sc-44045-SH and Profilin-1/2 shRNA (h) Lentiviral Particles: sc-44045-V.

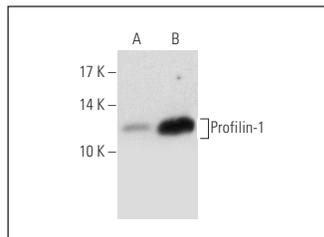
Molecular Weight of Profilin-1/2: 12-15 kDa.

Positive Controls: Profilin-1 (m): 293T Lysate: sc-125858, Hep G2 cell lysate: sc-2227 or JAR cell lysate: sc-2276.

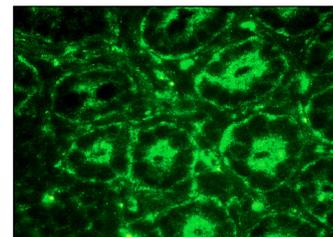
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



Profilin-1/2 (FL-140): sc-25788. Western blot analysis of Profilin-1 expression in non-transfected: sc-117752 (A) and mouse Profilin-1 transfected: sc-125858 (B) 293T whole cell lysates.



Profilin-1/2 (FL-140): sc-25788. Immunofluorescence staining of normal mouse intestine frozen section showing cytoplasmic staining.

SELECT PRODUCT CITATIONS

1. Aboualfa, M., et al. 1986. Suboccipito-vault skull diameter: an early indicator of ventricular dilatation in preterm babies. *Dev. Med. Child Neurol.* 28: 740-784.
2. Shieh, D.B., et al. 2010. Effects of Genistein on β -catenin signaling and subcellular distribution of Actin-binding proteins in human umbilical CD105-positive stromal cells. *J. Cell. Physiol.* 223: 423-434.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.



Try **Profilin-1 (B-10): sc-137235**, our highly recommended monoclonal alternative to Profilin-1/2 (FL-140).