

Profilin-1 (h): 293 Lysate: sc-110512

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 I 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.

REFERENCES

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2. Goldschmidt-Clermont, P.J., et al. 1992. The control of Actin nucleotide exchange by thymosin β 4 and Profilin. A potential regulatory mechanism for Actin polymerization in cells. *Mol. Biol. Cell* 3: 1015-1024.
3. Valenta, R., et al. 1992. Profilins constitute a novel family of functional plant pan-allergens. *J. Exp. Med.* 175: 377-385.
4. Honore, B., et al. 1993. Cloning and expression of a novel human Profilin variant, Profilin-2. *FEBS Lett.* 330: 151-155.
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6. Moldovan, N.I., et al. 1997. Regulation of endothelial cell adhesion by Profilin. *Curr. Biol.* 7: 24-30.
7. Witke, W., et al. 1998. In mouse brain Profilin-1 and Profilin-2 associate with regulators of the endocytic pathway and Actin assembly. *EMBO J.* 17: 967-976.

CHROMOSOMAL LOCATION

Genetic locus: PFN1 (human) mapping to 17p13.2.

PRODUCT

Profilin-1 (h): 293 Lysate represents a lysate of human Profilin-1 transfected 293 cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

RESEARCH USE

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

APPLICATIONS

Profilin-1 (h): 293 Lysate is suitable as a Western Blotting positive control for human reactive Profilin-1 antibodies. Recommended use: 10-20 μ l per lane.

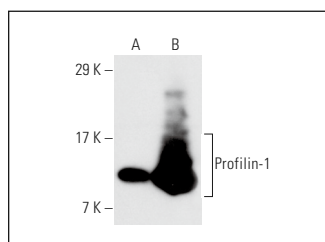
Control 293 Lysate: sc-110760 is available as a Western Blotting negative control lysate derived from non-transfected 293 cells.

Profilin-1 (B-10): sc-137235 is recommended as a positive control antibody for Western Blot analysis of enhanced human Profilin-1 expression in Profilin-1 transfected 293 cells (starting dilution 1:100, dilution range 1:100-1:1,000).

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.

DATA



Profilin-1 (B-10): sc-137235. Western blot analysis of Profilin-1 expression in non-transfected: sc-110760 (A) and human Profilin-1 transfected: sc-110512 (B) 293 whole cell lysates.

PROTOCOLS

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