



Profilin (aK-19): sc-15949

BACKGROUND

Profilin is a ubiquitous eukaryotic protein that regulates the actin cytoskeleton and is also a potent allergen in pollen. Four members of the *Arabidopsis thaliana* profilin multigene family encode the four distinct profilin isoforms of 131 to 134 amino acids. Profilin 1 and 2 are expressed in all major plant organs, whereas Profilin 3 and 4 are expressed in floral tissues only. These four profilins are low-molecular-weight actin binding proteins that are involved in modulating the assembly of actin microfilaments in the cytoplasm, and they are able to bind to both phosphatidyl-inositol-4, 5-bisphosphate and poly-L-proline, suggesting that they play an important role in signaling pathways. Mutant Profilin 1 seedlings cannot down-regulate Profilin 1 levels in the light. In addition, mutant Profilin 1 also affects the seedling development of *Arabidopsis thaliana*. In total, profilins play a role in cell elongation, cell shape maintenance, polarized growth of root hair and in determination of flowering time by having the ability to regulate actin polymerization and participate directly in signal transduction pathways.

REFERENCES

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SOURCE

Profilin (aK-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Profilin of *Arabidopsis thaliana* origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-15949 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Profilin (aK-19) is recommended for detection of Profilin of *Arabidopsis thaliana* origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

STORAGE

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

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.