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Product Information

Anti-AtRabA4b

produced in rabbit, affinity isolated antibody

Catalog Number **R1155**

Product Description

Anti-AtRabA4b is produced in rabbit using as immunogen a synthetic peptide corresponding to amino acids 201-219 located near the C-terminus of *Arabidopsis thaliana* AtRabA4b (GenelD: 830160), conjugated to KLH. The antibody is affinity-purified using the immunizing peptide immobilized on agarose.

Anti-AtRabA4b specifically recognizes recombinant AtRabA4b fusion protein by immunoblotting. Staining of the AtRabA4b band in immunoblotting is specifically inhibited by the immunizing peptide.

Rab GTPases belong to the superfamily of small GTP binding proteins that include Ras, Rho, Arf and Ran GTPases. Rab GTPases are involved in the regulation of diverse eukaryotic cellular processes such as cell proliferation, cytoskeletal assembly and organization and intracellular membrane trafficking. In eukaryotic cells Rab GTPases regulate membrane trafficking events associated with distinct compartments.¹ The type of subcellular compartment with which Rab GTPase is associated can be predicted based on sequence similarity.^{2,3} The *Arabidopsis* genome contains a total of 93 small GTPase genes, including 57 members of the Rab family. *Arabidopsis thaliana* Rab GTPase RabA4b (AtRabA4b, AtGB3, AtRab11G, 24 kDa), is highly similar to AtRab11. AtRabA4b labels a novel compartment that accumulates at the tips of expanding root hair cells.⁴ It has been suggested that in *A. thaliana*, the RabA4b GTPase regulates membrane trafficking steps involved in the polarized deposition of cell wall components in tip-growing root hair cells. AtRabA4b has been shown to label a novel, trans-Golgi network compartment displaying a developmentally regulated polar distribution in growing *A. thaliana* root hair cells. GTP bound AtRabA4b selectively recruits the plant phosphatidylinositol-4-kinase PI-4K β 1, but not other members of PI-4K families.⁵

Reagent

Supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide as a preservative.

Antibody concentration: ~1.5 mg/mL

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

For continuous use, store at 2-8 °C for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing, or storage in "frost-free" freezers, is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilutions should be discarded if not used within 12 hours.

Product Profile

Immunoblotting: a working concentration of 1-2 μ g/mL is recommended using a whole cell extract of *E. coli* expressing AtRabA4b fusion protein.

Note: In order to obtain the best results using various techniques and preparations, we recommend determining the optimal working dilutions by titration.

References

1. Zerial, M., and McBride, H., *Nature Rev. Mol. Cell Biol.*, **2**, 107-117 (2001).
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3. Vernoud, V., et al., *Plant Physiol.*, **131**, 1191-1208 (2003).
4. Preuss, M.L., et al., *Plant Cell*, **16**, 1589-1603 (2004).
5. Preuss, M.L., et al., *J. Cell Biol.*, **172**, 991-998 (2006).

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