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ProductInformation

Monoclonal Anti-AGB1
Clone AGB1-47
produced in mouse, purified immunoglobulin

Catalog Number **A2106**

Product Description

Monoclonal Anti-AGB1 (mouse IgG1 isotype) is derived from the hybridoma AGB1-47 produced by the fusion of mouse myeloma cells (NS1) and splenocytes from BALB/c mice immunized with a synthetic peptide corresponding to amino acids 362-377 of *Arabidopsis* AGB1 (Gene ID: 829597), conjugated to KLH. The isotype is determined using a double diffusion immunoassay using Mouse Monoclonal Antibody Isotyping Reagents, Catalog Number ISO2.

Monoclonal Anti-AGB1 recognizes *Arabidopsis* AGB1. The antibody may be used in ELISA and immunoblotting (~40 kDa). The antibody does not cross react with *Arabidopsis* AGG1.

Signaling through G-proteins is highly conserved in eukaryotes. G-proteins are responsible for transferring extracellular signals from cell-surface receptors. Upon ligand binding to G-protein coupled receptor (GPCR) there is a GDP/GTP exchange on the α-subunit of G proteins (Gα), causing a dissociation of Gα- from Gβγ dimer.[1-3]

The *Arabidopsis* genome contains genes encoding one G-protein α-subunit (GPA1), one β-subunit (AGB1), and two γ-subunits (AGG1 and AGG2). Studies on the null alleles of GPA1 and AGB1 showed that plants use heterotrimeric G-protein signaling in several growth and developmental processes. Abscisic acid (ABA) regulates many physiological processes like seed germination, early seeding development, stomatal guard cell functions and acclimation to adverse environmental conditions. Knocking out GPA1 and/or AGB1 in *Arabidopsis* plants negatively regulates abscisic acid signaling in seed germination and in early seedling development. The lack of AGB1 causes a greater ABA hypersensitivity than the lack of GPA1, suggesting that AGB1 is the predominant regulator of ABA signaling.[1-3]

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: ~2 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 extended storage, freeze in working aliquots at –20 °C. 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 dilution samples should be discarded if not used within 12 hours.

Product Profile

Immunoblotting: a working concentration of 0.5-1 µg/mL is recommended using recombinant AGB1 protein.

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

References

1. Jones, A.M., and Assmann, S.M., *EMBO Rep.*, **5**, 572-578 (2004).
2. Pandy, S., et al., *Plant Phys.*, **141**, 243-256 (2006).
3. Chen, J.G., et al., *Plant Phys.*, **135**, 907-915 (2004).

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