SANTA CRUZ BIOTECHNOLOGY, INC.

SGS2 (aN-17): sc-14062

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Plants promote resistance to pathogens by either eliciting an active defense by initiating the transcription of several resistance (R) genes or by utilizing post-transcriptional gene silencing (PTGS). PTGS results in the specific degradation of transgenic mRNA following transcription, which either have a high rate of transcription or where the transgenic locus is between inverted repeats. PTGS is a phenomenon similar to that of quelling in fungi and RNA interference (RNAi) in animals. SGS2 and SGS3 (for suppressor of gene silencing) control PTGS in *Arabidopsis thaliana*, and SGS2 and SGS3 mutants display enhanced susceptibility to cucumovirus CMV. Alternatively, FLS2 is an R gene involved in the recognition of flagellin, the main protein of the bacterial flagella, and subsequently, activates the defense response in *Arabidopsis thaliana*. FLS2 contains an extracellular leucine-rich repeat (LRR) similar to other R genes, a transmembrane domain and a cytoplasmic serine/threonine kinase domain, which is required for proper binding of flagellin.

REFERENCES

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2. Fagard, M., Boutet, S., Morel, J. B., Bellini, C., and Vaucheret, H. 2000. AGO1, QDE-2, and RDE-1 are related proteins required for post-transcriptional gene silencing in plants, quelling in fungi, and RNA interference in animals. Proc. Natl. Acad. Sci. USA 97: 11650-11654.
3. Gomez-Gomez, L. and Boller, T. 2000. FLS2: an LRR receptor-like kinase involved in the perception of the bacterial elicitor flagellin in *Arabidopsis*. Mol. Cell 5: 1003-1111.
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5. Wianny, F. and Zernicka-Goetz, M. 2000. Specific interference with gene function by double-stranded RNA in early mouse development. Nat. Cell Biol. 2: 70-75.
6. Gomez-Gomez, L., Bauer, Z., and Boller, T. 2001. Both the extracellular leucine-rich repeat domain and the kinase activity of FSL2 are required for flagellin binding and signaling in *Arabidopsis*. Plant Cell 13: 1155-1163.

SOURCE

SGS2 (aN-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of SGS2 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-14062 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

SGS2 (aN-17) is recommended for detection of SGS2 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.