



## SGT1 (aC-15): sc-22513

### BACKGROUND

Plants have evolved intricate defence mechanisms to cope with the wide array of microbial pathogens they encounter. Plant disease resistance (R) genes trigger innate immune responses upon pathogen attack. RAR1 is an early convergence point in a signaling pathway engaged by multiple R genes. RAR1 interacts with plant orthologs of the yeast protein SGT1, an essential regulator in the cell cycle. SGT1 associates with SKP1 and CUL1, subunits of the SCF (Skp1-Cullin-F-box) ubiquitin ligase complex. Furthermore, the RAR1-SGT1 complex also interacts with two COP9 signalosome components. The interactions among RAR1, SGT1, SCF, and signalosome subunits indicate a link between disease resistance and ubiquitination. Mutations in SGT1b, one of two highly homologous Arabidopsis SGT1 genes, disable early plant defenses conferred by multiple R genes. Loss of SGT1b function in resistance is not compensated for by SGT1a. The gene AtSGT1b encodes a predicted protein of 39.8 kDa and the function of SGT1 is conserved in evolution. SGT1 is required for resistance responses mediated by nucleotide-binding site/leucine-rich repeat (NBS-LRR) and other R proteins in which pathogen-derived elicitors are recognized either inside or outside the host plant cell.

### REFERENCES

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### SOURCE

SGT1 (aC-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of SGT1 of *Arabidopsis thaliana* origin.

### STORAGE

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

### 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-22513 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### APPLICATIONS

SGT1 (aC-15) is recommended for detection of SGT1 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 Blotting 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.

### RESEARCH USE

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

### PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.