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product **AS11 1630** **RGA | DELLA protein RGA**

product information

Background | **DELLA protein RGA** is a putative transcriptional regulator that acts as a repressor of the gibberellin (GA) signaling pathway. It is a member of VHIID/DELLA regulatory family and is the most sensitive to GA application, compare to other DELLA proteins. Involved in fruit and flower development. Synonyms: GAI-related sequence, GRAS family protein 10, AtGRAS-10, Repressor on the ga1-3 mutant, Restoration of growth on ammonia protein 1.

Immunogen | KLH-conjugated peptide chosen from RGA of *Arabidopsis thaliana* UniProt: Q9SLH3, TAIR: At2g01570

Host | Rabbit

Clonality | Polyclonal

Purity | Affinity purified serum in PBS, pH 7.4

Format | Lyophilized

Quantity | 50 µg

Reconstitution | For reconstitution add 50 µl of sterile water.

Storage | Store lyophilized/reconstituted at -20°C; once reconstituted make aliquots to avoid repeated freeze-thaw cycles. Please, remember to spin tubes briefly prior to opening them to avoid any losses that might occur from lyophilized material adhering to the cap or sides of the tubes.

Tested applications | Western blot (WB)

Related products | [AS11 1631](#) | Anti-GAI | DELLA protein GAI, rabbit antibodies
[AS16 3154](#) | Anti-PIF3 | Phytochrome interacting factor 3, goat antibodies
[AS16 3955](#) | Anti-PIF4 | PHYTOCHROME INTERACTING FACTOR 4, goat antibodies
[AS11 1802](#) | Anti-RGA-like protein | DELLA protein RGL1, rabbit antibodies
[AS11 1803](#) | Anti-RGA-like protein 2 | DELLA protein RGL2, rabbit antibodies

[Plant and algal protein extraction buffer](#)

[Secondary antibodies](#)

Application information

Recommended dilution | 1 : 1000 (WB)

Expected | apparent MW | 64 | 64 kDa

Confirmed reactivity | *Arabidopsis thaliana*

Predicted reactivity | *Arabidopsis thaliana*

Not reactive in | *Triticum aestivum*

Additional information | RGA protein is prone to degradation therefore caution has to be taken during protein extraction.

Selected references | [Ferrero et al. \(2019\)](#). Class I TCP transcription factors target the gibberellin biosynthesis gene GA20ox1 and the growth promoting genes HBI1 and PRE6 during thermomorphogenic growth in Arabidopsis. *Plant Cell Physiol*. 2019 Jul 11. pii: pcz137. doi: 10.1093/pcp/pcz137.
[Lorrai et al. \(2018\)](#). Abscisic acid inhibits hypocotyl elongation acting on gibberellins, DELLA proteins and auxin. *AoB Plants*. 2018 Oct 5;10(5):ply061. doi: 10.1093/aobpla/ply061.
[Chahtane et al. \(2018\)](#). The plant pathogen *Pseudomonas aeruginosa* triggers a DELLA-dependent seed germination arrest in Arabidopsis. *Elife*. 2018 Aug 28;7. pii: e37082. doi: 10.7554/eLife.37082.
[Shahnejat-Bushehri et al. \(2016\)](#). Arabidopsis NAC transcription factor JUB1 regulates GA/BR metabolism and signalling. *NATURE PLANTS* 2: Article number: 16013, 2016.
[Crocco et al. \(2015\)](#). The transcriptional regulator BBX24 impairs DELLA activity to promote shade avoidance in

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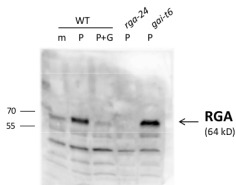
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Arabidopsis thaliana. Nat Commun. 2015 Feb 6;6:6202. doi: 10.1038/ncomms7202.

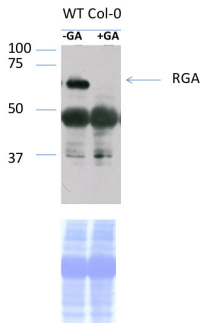
[Leone](#) et al. (2014). To grow or defend? Low red : far-red ratios reduce jasmonate sensitivity in *Arabidopsis* seedlings by promoting DELLA degradation and increasing JAZ10 stability. New Phytol. 2014 Oct;204(2):355-67. doi: 10.1111/nph.12971. Epub 2014 Aug 7.

Application example



40 µg of total protein from 5-d-old dark-grown *Arabidopsis thaliana* seedlings extracted with 50 mM Tris-HCl pH 7.5., 10% glycerol, 150 mM NaCl, 0.1% NP-40, 1 mM PMSF, and 1x protease inhibitor cocktail (Roche) were separated on 4-20 % SDS-PAGE and blotted 1h to PVDF. **m:** mock, **P:** paclobutryrazol, **P+G:** PAC+GAs. Blots were blocked with 2% blocking reagent (GE Healthcare) in TBS-T for 1h at room temperature (RT) with agitation. Blot was incubated in the primary antibody at a dilution of 1: 1 000 for 1h at RT with agitation. The antibody solution was decanted and the blot was rinsed briefly twice, then washed once for 15 min and 3 times for 5 min in TBS-T at RT with agitation. Blot was incubated in secondary antibody (anti-rabbit IgG horse radish peroxidase conjugated, from Agrisera, [AS09 602](#)) diluted to 1:10 000 in for 1h at RT with agitation. The blot was washed as above and developed for 5 min with chemiluminescence detection reagent, according to the manufacturers instructions. Exposure time was 20 seconds in a LAS-3000 Imager (Fuji).

Courtesy of Dr. David Alabadi, IBMCP (CSIC-UPV), Valencia, Spain



Arabidopsis thaliana seedlings were ground in liquid nitrogen (100 µl of 2.5 x Laemli for 80-120 mg of homogenized material) and boiled in 2.5x Laemmli Buffer (WITH 60 Mm DTT final concentration) otherwise RGA protein will degrade. Plants were grown on 1/ MS for 15 days and were treated with 1 µM GA for 2 hours (GA+) or without hormone (GA-). Total protein extracts were denatured for 2 min. at 95 °C and were separated on 10% SDS-PAGE and blotted overnight to PVDF using tank transfer. Blots were blocked for 1.5 h with TBS-T containing 5% low fat milk for 2h at room temperature (RT) with agitation. Blot was incubated in the primary antibody at a dilution of 1: 1 000 for 1h 30min at RT with agitation. The antibody solution was decanted and the blot was washed 5 x 10min in TBS-T at RT with agitation. Blot was incubated in secondary antibody (anti-rabbit IgG horse radish peroxidase conjugated, from Agrisera, [AS09 602](#)) diluted to 1:10 000 for 1h 30 min at RT with agitation. The blot was washed 6 x 10min in TBS-T at RT with agitation and developed for 5 min with ECL according to the manufacturer's instructions. Exposure time was 5 seconds with West Femto (Pierce).

Courtesy of Kamila Jaronczyk, IBB, Warsaw, Poland