

# DELLA protein RGL2 (RGL2), Recombinant Protein

Cat      *RP01840*

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## Species

*Arabidopsis thaliana* (Mouse-ear cress)

## Full Product Name

Recombinant *Arabidopsis thaliana* DELLA protein RGL2 (RGL2) , partial

## Product Gene Name

RGL2 recombinant protein

## Product Synonym Gene Name

RGL2

## Purity

Greater or equal to 85% purity as determined by SDS-PAGE. (lot specific)

## Format

Lyophilized or liquid (Format to be determined during the manufacturing process)

## Host

E Coli or Yeast or Baculovirus or Mammalian Cell

## Molecular Weight

60,494 Da

## Storage

Store at -20°C. For long-term storage, store at -20°C or -80°C. Store working aliquots at 4°C for up to one week. Repeated freezing and thawing is not recommended.

## Protein Family

DELLA protein

## NCBI Accession #

NP\_186995.1

## NCBI GI #

15228553

## NCBI GenBank Nucleotide #

NM\_111216.3

## NCBI GeneID

821251

## NCBI Official Full Name

RGA-like 2

## NCBI Official Symbol

RGL2

## NCBI Official Synonym Symbols

**FOR RESEARCH OR FURTHER MANUFACTURING USE ONLY**

# DELLA protein RGL2 (RGL2), Recombinant Protein

Cat *RP01840*

RGA-like 2; T21P5.13; T21P5\_13

## NCBI Protein Information

RGA-like 2

## NCBI Summary

Encodes a DELLA protein, a member of the GRAS superfamily of putative transcription factors. DELLA proteins restrain the cell proliferation and expansion that drives plant growth. Negative regulator of the response to GA in controlling seed germination. GA triggers the degradation of RGL2 protein in a process blocked by both proteasome inhibitors and serine/threonine phosphatase inhibitors. The protein undergoes degradation in response to GA via the 26S proteasome. RGL2 may be involved in reducing ROS accumulation in response to stress by up-regulating the transcription of superoxide dismutases. Rapidly degraded in response to GA. Regulates GA-promoted seed germination. Involved in flower and fruit development.

## UniProt Gene Name

RGL2

## UniProt Synonym Gene Names

SCL19; AtGRAS-15; AtSCL19

## UniProt Protein Name

DELLA protein RGL2

## UniProt Synonym Protein Names

GRAS family protein 15; AtGRAS-15; RGA-like protein 2; Scarecrow-like protein 19; AtSCL19

## UniProt Primary Accession #

Q8GXW1

## UniProt Secondary Accession #

Q9SRP9

## UniProt Related Accession #

Q8GXW1

## UniProt Comments

Probable transcriptional regulator that acts as a repressor of the gibberellin (GA) signaling pathway. No effect of the BOI proteins on its stability. Probably acts by participating in large multiprotein complexes that repress transcription of GA-inducible genes. Upon GA application, it is degraded by the proteasome, allowing the GA signaling pathway. Acts as a major GA-response repressor of seed germination, including seed thermoinhibition. Promotes the biosynthesis of abscisic acid (ABA), especially in seed coats to maintain seed dormancy. Delays flowering and adult leaf production. Also regulates the floral development, petal, stamen and anther development, by repressing the continued growth of floral organs. Its activity is probably regulated by other phytohormones such as auxin and ethylene. Involved in the regulation of seed dormancy and germination, including glucose-induced delay of seed germination. Promotes salt tolerance. Acts as a repressor of positive regulators of trichome initiation. Required during the flagellin-derived peptide flg22-mediated growth inhibition. Contributes to the susceptibility to the biotrophic pathogen *P.syringae* pv. tomato and to the resistance to the necrotrophic pathogens *B.cinerea* *A.brassicicola*, probably by repressing the SA-defense pathway and preventing cell death. Prevents stress-induced reactive oxygen species (ROS) accumulation (e.g. salt stress) by acting on the ROS scavenging system, and delays ROS-induced cell death, thus promoting stress tolerance.

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