

## **Appendix**

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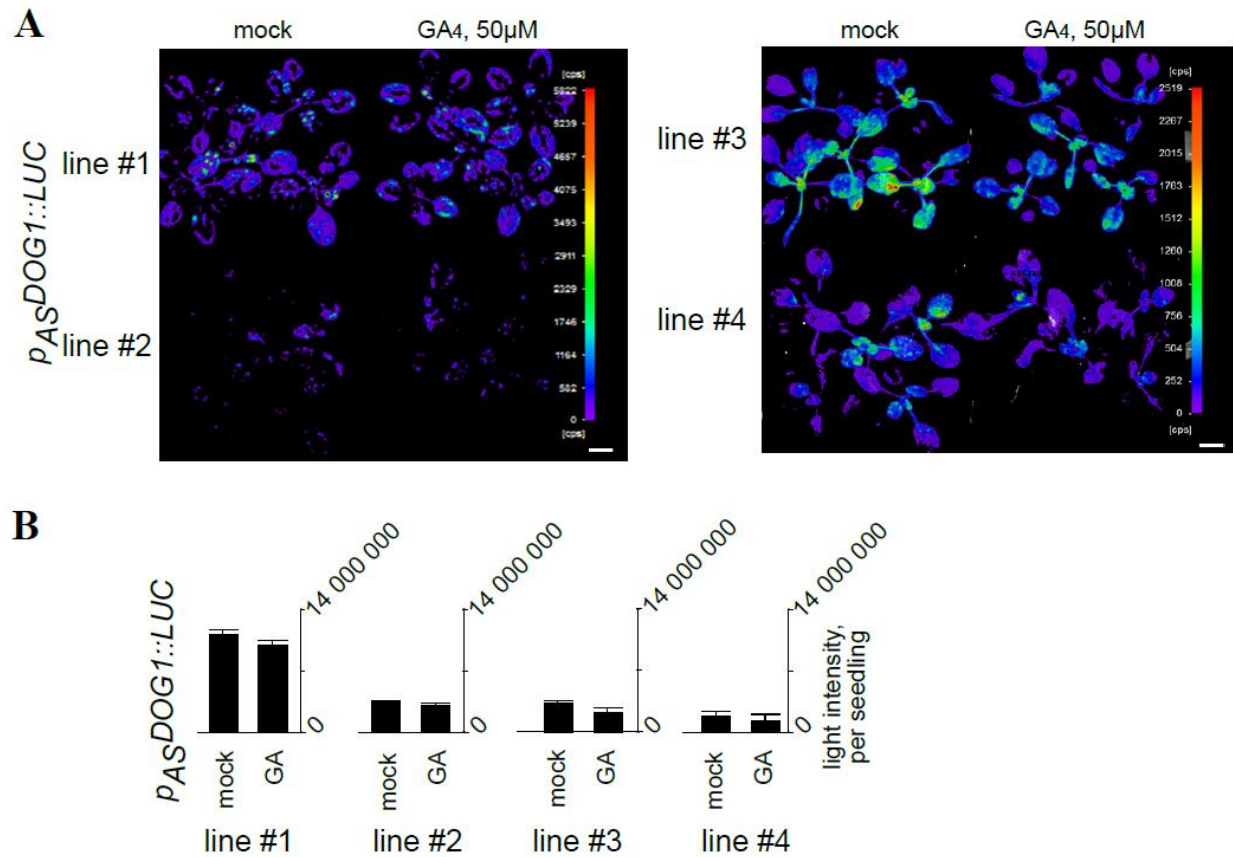
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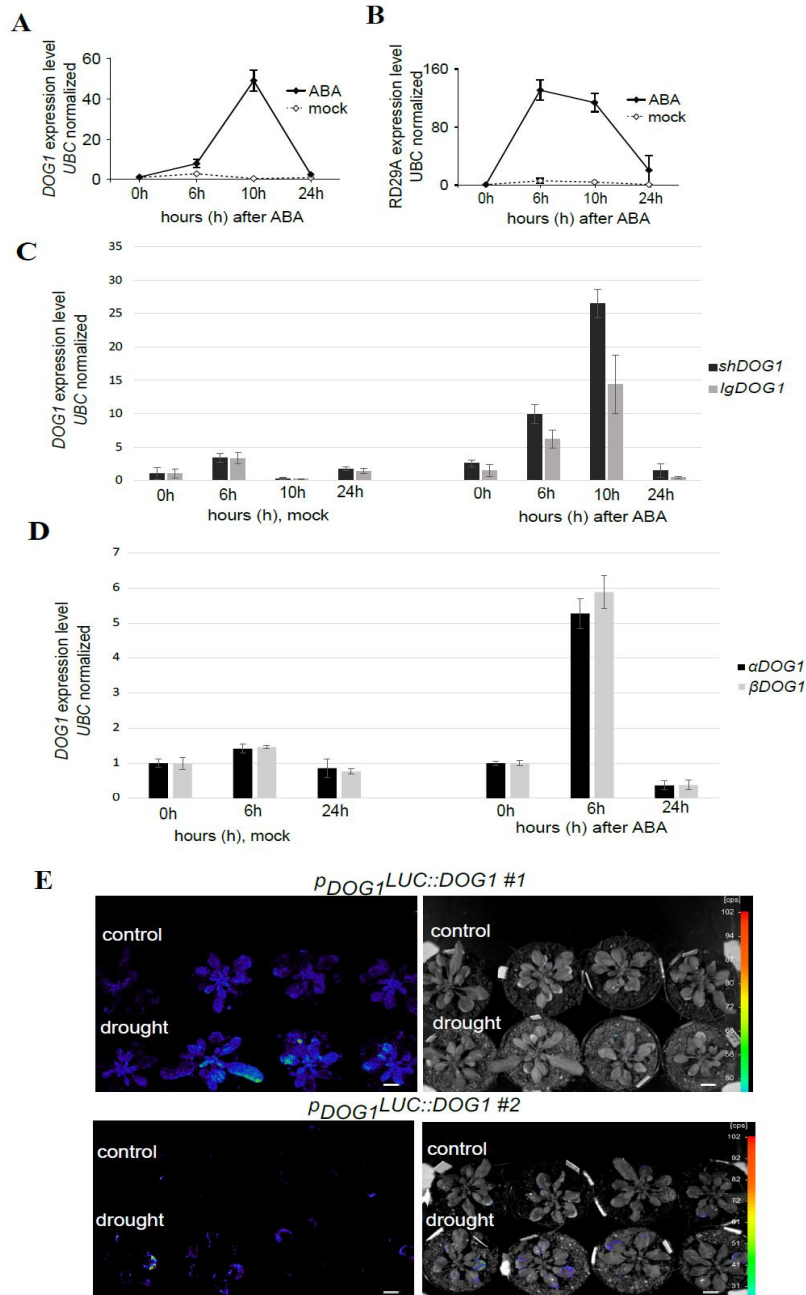


**Appendix Figure S1. *DOG1* antisense promoter activity is unaffected by gibberellic acid (GA).**

**A** Spraying with 50µM GA<sub>4</sub> does not influence antisense expression in transgenic plants expressing *pASDOG1::LUC* construct after 24 h. Scale bar: 2cm.

**B** LUC picture quantification of light intensity per plant. Error bars represent standard deviation.

## Appendix Figure S2.



## Appendix Figure S2.

**A, B** *DOG1* and *RD29* time course induction after 100 $\mu$ M ABA spray-inoculation in 40-day-old Col-0 (WT) plants.

**C** RT-qPCR analysis of short (*shDOG1*) and long (*lgDOG1*) *DOG1* mRNA splice forms after spray-inoculation with 100 $\mu$ M ABA.

**D** RT-qPCR analysis of  $\alpha$ *DOG1* and  $\beta$ *DOG1* mRNA splice forms after spray-inoculation with 100 $\mu$ M ABA.

**E** Transgenic plants expressing *pDOG1LUC::DOG1* construct after 3 days of drought. Error bars represent standard deviation. Scale bar: 1cm.

## Appendix Figure S3.

601>ATTTTAAGTTATCAAATCGCATTGAAGAGACTCAAATCAATTTAT-AGAATGAATCATGTAAACATTATTCCACCATGAAGTGGTTACTTAGGTTTAATG>699  
601>atTTTAAGTTATCAAATCGCATTGAAGAGACTCAAATCAATTTAT-AGAATGAATCATGTAAACATTATTCCACCATGAAGTGGTTACTTAGGTTTAATG>699

700>TTATTTAAAGTTAAAGAGCTTACTAATCGCGATCCTAACTTTAACCCCTATAGTACATTTACCACCTATGAATACTTGAATGTTGTGGAATCTTATCT>798  
700>attTTTAAAGTTAAAGAGCTTACTAATCGCGATCCTAACTTTAACCCCTAAGTACATTTACCACCTATGAATACTTGAATGTTGTGGAATCTTATCT>798

799>CAAGTATAGAGCTTGGTTAGGTTAATGAGTTAAGTTGATA-TAAATTAAGTTAATAGATACAGTTGAATTTTCGAACTAGAAGCTC-TTATTTTAA>896  
799>caagtaAGAGCTTGGTTAGGTTAATGAGTTAAGTTGATA-TAAATTAAGTTAATAGATACAGTTGAATTTTCGAACTAGAAGCTC-TTATTTTAA>896

897>CCTAACTCTGCCAAGTCCATAAAAAAAGGATGCGTTCAATGAAAAAAGGATGCTTCCACAATTTATTT-AGATACTCCACAATTTCTTTATGAA>995  
897>cctaaactctGCCAAGTCCATAAAAAAAGGATGCGTTCAATGAAAAAAGGATGCTTCCACAATTTATTT-AGATACTCCACAATTTCTTTATGAA>995

996>TATTCCTACCACAAAAATAA-TAATGGAAAAATCTAAGAATAT-AAAAATCCAATGCAATCTTGGATAAAAACTCCTAGCTGACTTGTGCGAGACGAG>1093  
996>tattcctaccacaaaaATAA-TAATGGAAAAATCTAAGAATAT-AAAAATCCAATGCAATCTTGGATAAAAACTCCTAGCTGACTTGTGCGAGACGAG>1093

1094>ATCATGTTGCTGCCACGTAACACACAAATCTCAATTTCTCTCATTTTGTGCTCTCCGTGGGGCGTGGGCCACTATTCACAGTTGTACATGCATCGAA>1193  
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1292>aatgtaacCTTAT-AAATGATTTCTTATCCATTAACCAAAAAAAGG-TTATTTTTATCCTTACAACTACAATCTTATAACGAAACAATAAT-TATTAT>1388

1389>ATAAGATTATATA--TAAACTATATTTCTGCATTTAATAAAAAACAAAAGATCCATCTTATACAAAGCAAAATCTTAATTTTATAATA--TAAAC>1482  
1389>ataAGATTATATA--TAAACTATATTTCTGCATTTAATAAAAAACAAAAGATCCATCTTATACAAAGCAAAATCTTAATTTTATAATA--TAAAC>1482

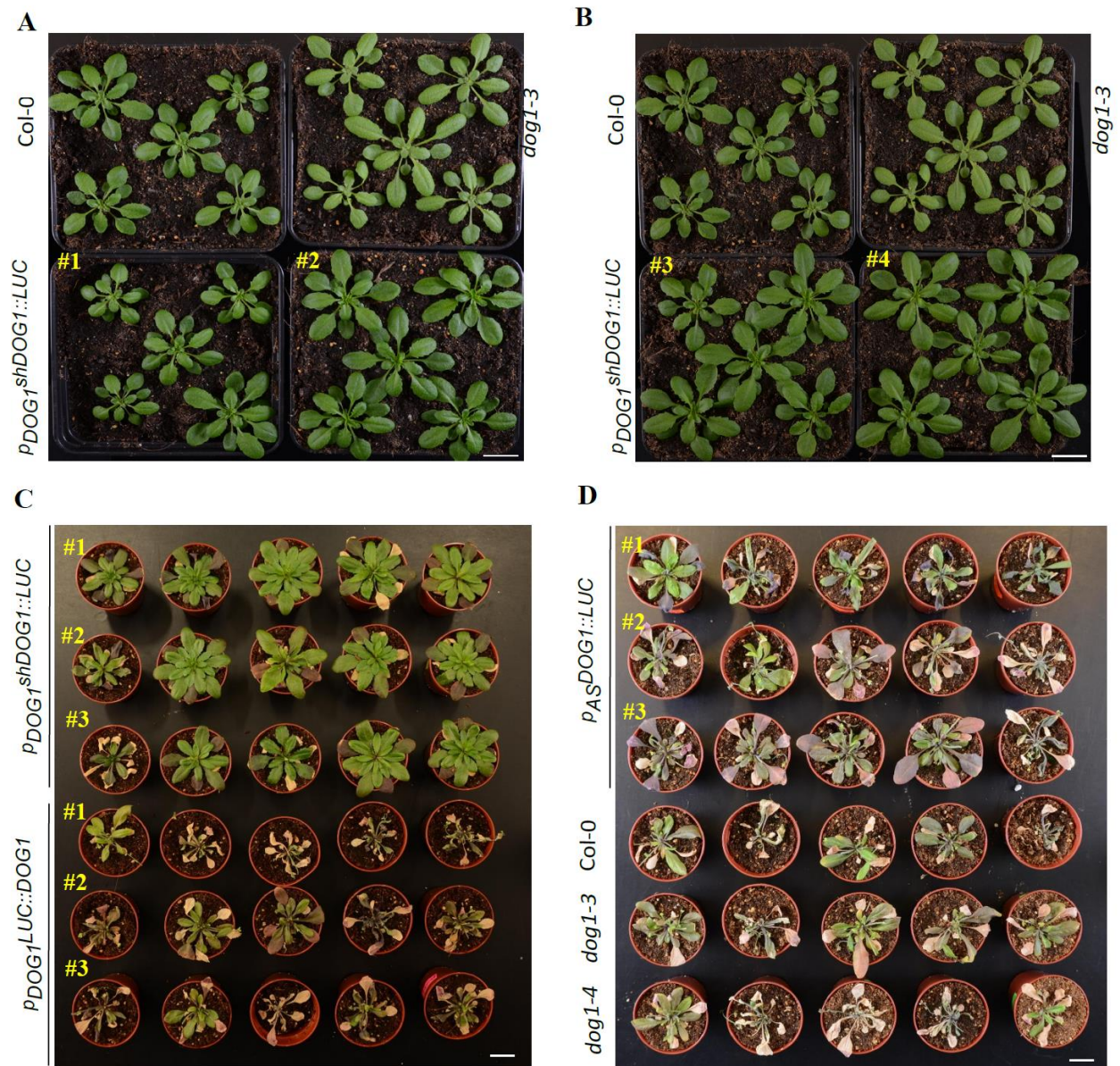
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1582>TTTATAATATCAAGATTGAAAACCTTGTATTATGCAATTTT-AAATATGACACGTACGTACCTATAGTATCATATCTAATATAATAACGACTACTTTCC>1680  
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1681>TTCTCTCCTCCGGCATTACCTTCGGTGTCAACCATACAGTCACGACGGCGACGATCTCTCATAGTTCCTCCACTCATGCATCGAAAGATGAAGCTTTTTTC>1780  
1681>TTCTCTCCTCCGGCATTACCTTCGGTGTCAACCATACAGTCACGACGGCGACGATCTCTCATAGTTCCTCCACTCATGCATCGAAAGATGAAGCTTTTTTC>1780

Appendix Figure S3. Sequence alignment of *DOG1* antisense promoter (upper sequence) vs. TATA-box mutated promoter (lower sequence).

Appendix Figure S4.

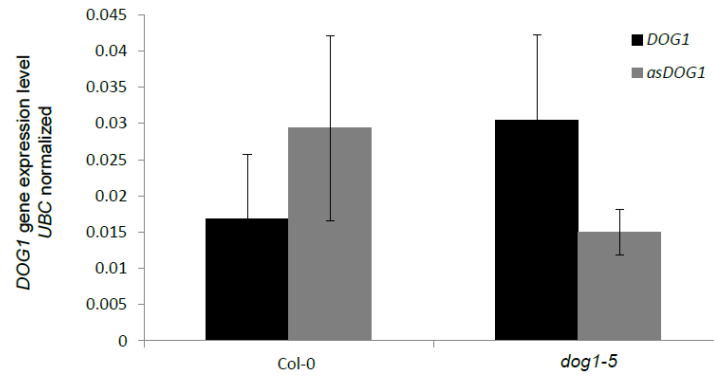


**Appendix Figure S4. Growth phenotype of tested *DOG1* transgenic and mutant plants.**

**A, B** Phenotype of transgenic lines expressing  $p_{DOG1shDOG1}::LUC$  construct vs. Col-0 (WT) and  $dog1-3$  mutant under normal conditions. Scale bar: 2cm.

**C, D**  $p_{DOG1shDOG1}::LUC$ ,  $p_{ASDOG1}::LUC$  and  $p_{DOG1LUC}::DOG1$  constructs vs. Col-0 (WT),  $dog1-3$  and  $dog1-4$  mutant plants after 10 days of water withdrawal and 2 days of recovery. All plants shown in the left and right panels were grown side by side and imaged on the same day. Scale bar: 2cm.

## Appendix Figure S5.



### Appendix Figure S5. *dog1-5* has a very small effect on antisense expression in seedlings.

*DOG1* sense and antisense mRNA accumulation in seedlings of *dog1-5* mutant. Plants were grown in hydroponic culture as described and harvested at 2 weeks old [81]. Error bars represent standard deviation.

Appendix Table S1. Primer list.

Primer name	Sequence
pDOG1antis_F_EcoR1	GGGAATTCTTTTTTTTGGGGTCTAAACCTTGC
pDOG1antis_R_Sal1	GGGTCGACGGTGGCGGCGGTGCATCACTTAGCG
DOG1_TATA_f1_F	GGGTACGTACGTGTCATTTTAAAAA
DOG1_TATA_f1_R	TCAATTTCTCTCATTGTTTGTCGTC
DOG1_TATA_f2_F	CTATTTTTTTAAGTTTATTCACGTC
DOG1_TATA_f2_R	CCCCTAGTATTCTTGGCGATTAAG
AS.pr_EcoRI_dTATA	GGGAATTCTTTTTTTTGGGGTCTAAACCT
AS.pr_SalI_dTATA	GGGCTCGAGGTCGACGGTGGCGGCGGTGCATCA