

## Tomato PYR/PYL/RCAR ABA receptors show high expression in root, differential sensitivity to the ABA-agonist quinabactin and capability to enhance plant drought resistance

Miguel Gonzalez-Guzman<sup>1\*</sup>, Lesia Rodriguez<sup>1\*</sup>, Laura Lorenzo-Orts<sup>1</sup>, Clara Pons<sup>1</sup>, Alejandro Sarrion-Perdigones<sup>1</sup>, Maria A. Fernandez<sup>1</sup>, Marta Peirats-Llobet<sup>1</sup>, Javier Forment<sup>1</sup>, Maria Moreno-Alvero<sup>2</sup>, Sean R. Cutler<sup>3</sup>, Armando Albert<sup>2</sup>, Antonio Granell<sup>1</sup> and Pedro L. Rodriguez<sup>1†</sup>

**Table S1.** List of oligonucleotides used in this work.

### **SI12g055990**

ACCATGGTGAACAATATGGAAGATGAG	FNco12g055990
CTAGATTCTATCAATAGGGTCGGT	R12g055990

### **SI09g015380**

ACCATGGCTCCAAAATCATCACTTTTAC	FNco09g015380
GGATCCTCATTTCAAATTTGTAGTATTTGAATTC	RBH09g015380

### **SI06g050500**

ACCATGGCTTCTTCCCTTCAACTGCATC	FNco06g050500
TTAATCATGATCCATAGATAAATTTATTAC	R06g050500

### **SI03g007310**

ACCATGGACGCTAATGGATTCTGCGGTG	FNco03g007310
TTAGACCTGATCAATGGGTTCTG	R03g007310

### **SI08g76960**

ACCATGGATAATAAACCGGAAACGTC	FNco08g76960
AAGCTTTCACCTGTGACTCGCATCACGAC	RHindIII08g076960

### **SI06g061180**

ATGGAGCAATCCGATAACTCAAC	F06g061180
TTATGAGATCTCACCGTTACCACC	R06g061180

### **SI03g095780**

ACCATGGCTTGTTTCAGTTCAGCTGCAG	FNco03g095780
TCAGCGATTTGCAGTTGCGATTTG	R03g095780

### **SI12g096020**

CGCAGTGTTTTTGAAGTGGACTAC	FΔN12g096020
TTATGAGGCCAATTGTGTTGAAG	R12g096020

**Solyc03g096670**

ACCATGGCTTTTGGCGAGACTAGA  
CTATAGACCTCTTTTCAAATCAAC

FNco03g096670

R03g096670

**Solyc05g052980**

ATGGCTGGAATGTGTTGTGGAGT  
TTATAGATTTTTTCTCAAATCCACC

F05g052980

R05g052980

**Solyc07g040990**

ACCATGGTTGTGGGTGCTGAAGATT  
GTCGACTTATGTTTTCTTCTTGAATTCCT

FNcoΔN7g040990

RSalI7g040990

**Solyc06g067980 (SILEA)**

AGCAGATGTTGGAAAAGGAGC

FqPCR06g067980

ATGCCTATGGTGGGGTATGTG

RqPCRF06g067980

**Solyc02g084850 (SIRAB18)**

CCTGGGATGCATTGAACACC  
CACGGGACACCATAACACAC

FqPCR02g08450

RqPCR02g08450

**Solyc06g019170 (SIP5CS1)**

ACCTTAATCTGGAGGCTTGAGAG  
AATTATTCACCCACCTGCCC

FqPCR06g019170

RqPCR06g019170

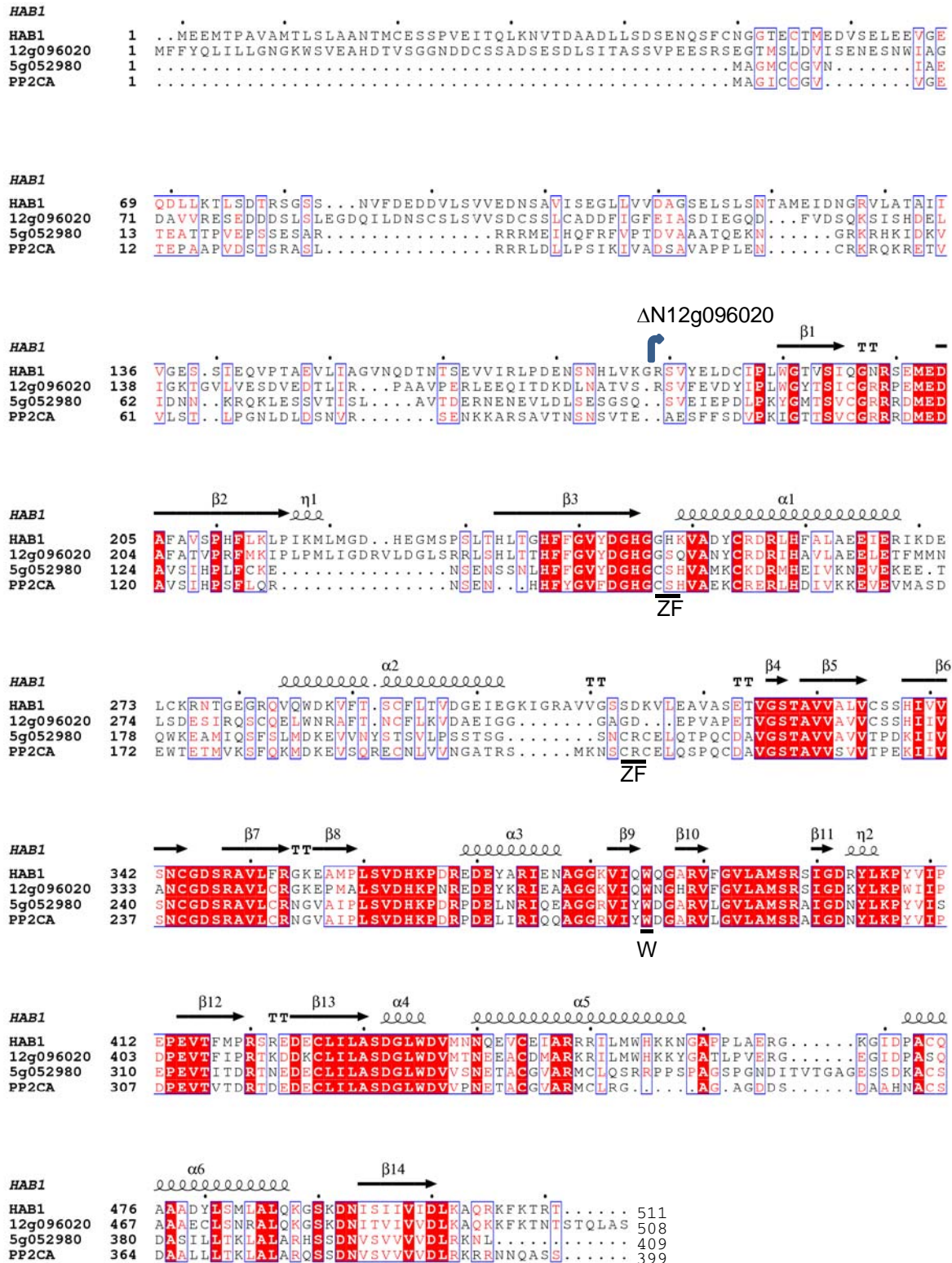
**Solyc06g009970 (SIEF1a)**

GACAGGCGTTCAGGTAAGGA  
GGGTATTCAGCAAAGGTCTC

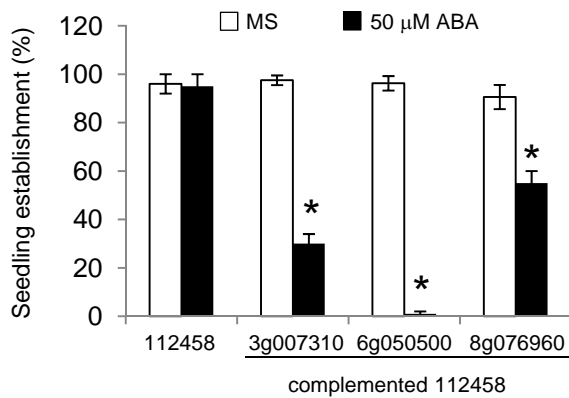
FqPCR06g009970

FqPCR06g009970





**Fig. S2.** Amino acid sequence alignment of AtHAB1, AtPP2CA and putative tomato orthologous PP2Cs. The predicted secondary structure of the tomato proteins was depicted taking as model the crystallographic structure of AtHAB1 (Protein DataBank Code 3QN1) and using Esript interface (<http://esript.ibcp.fr/>). The CCCH zing-finger (ZF) motif of AtPP2CA and 5g052980 and the tryptophan (W) conserved residue of clade A PP2Cs are underlined. The start of the ΔN 12g096020 PP2C is indicated.



**Fig. S3.** Complementation of the 112458 *pyr/pyl* mutant by tomato PYR/PYL ABA receptors. Expression of HA-tagged 3g007310, 6g050500 or 8g076960 complements (partially in the case of 8g076960) the ABA-insensitive phenotype of 112458 *pyr/pyl* mutant, which lacks 6 major *Arabidopsis* ABA receptors, i.e. PYR1, PYL1, PYL2, PYL4, PYL5 and PYL8 (Gonzalez-Guzman et al., 2012). Approximately 100 seeds of each genotype (two independent experiments) were sown on MS plates lacking or supplemented with 50  $\mu$ M ABA. Seedlings were scored for the presence of both green cotyledons and the first pair of true leaves after 8 d. Values are averages  $\pm$  SE. \* indicates  $p < 0.05$  (Student's t test) when comparing data of 112458 mutant transformed with the indicated tomato receptor to 112458 in the same assay conditions.