

Hen Egg White Lysozyme (HEWL) Confers Resistance to Verticillium Wilt in Cotton by Inhibiting the Spread of Fungus and Generating ROS Burst

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nptII:

atgattgaacaagatggattgcacgcaggttctccggcgttgggtggagaggctattcggctatgactgggcacacagacaatcggtgctctgatg
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HEWL:

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Figure S1. The gene sequences of *nptII*, *CP4-EPSPS*, *HEWL* in the plant expression vector pBI121-35S::CP4-EPSPS-PetE::HEWL.

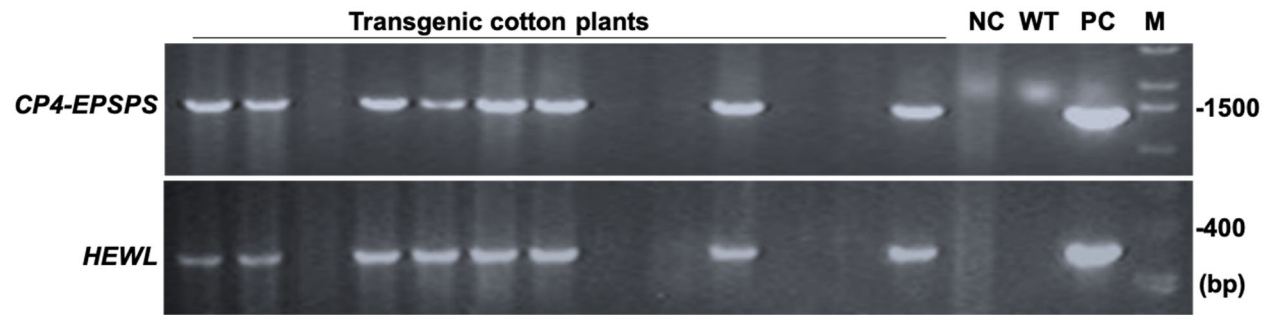


Figure S2. PCR analysis of T₀ transgenic cotton plants generation. NC: blank control; WT: wild type; PC: plasmid as positive control.

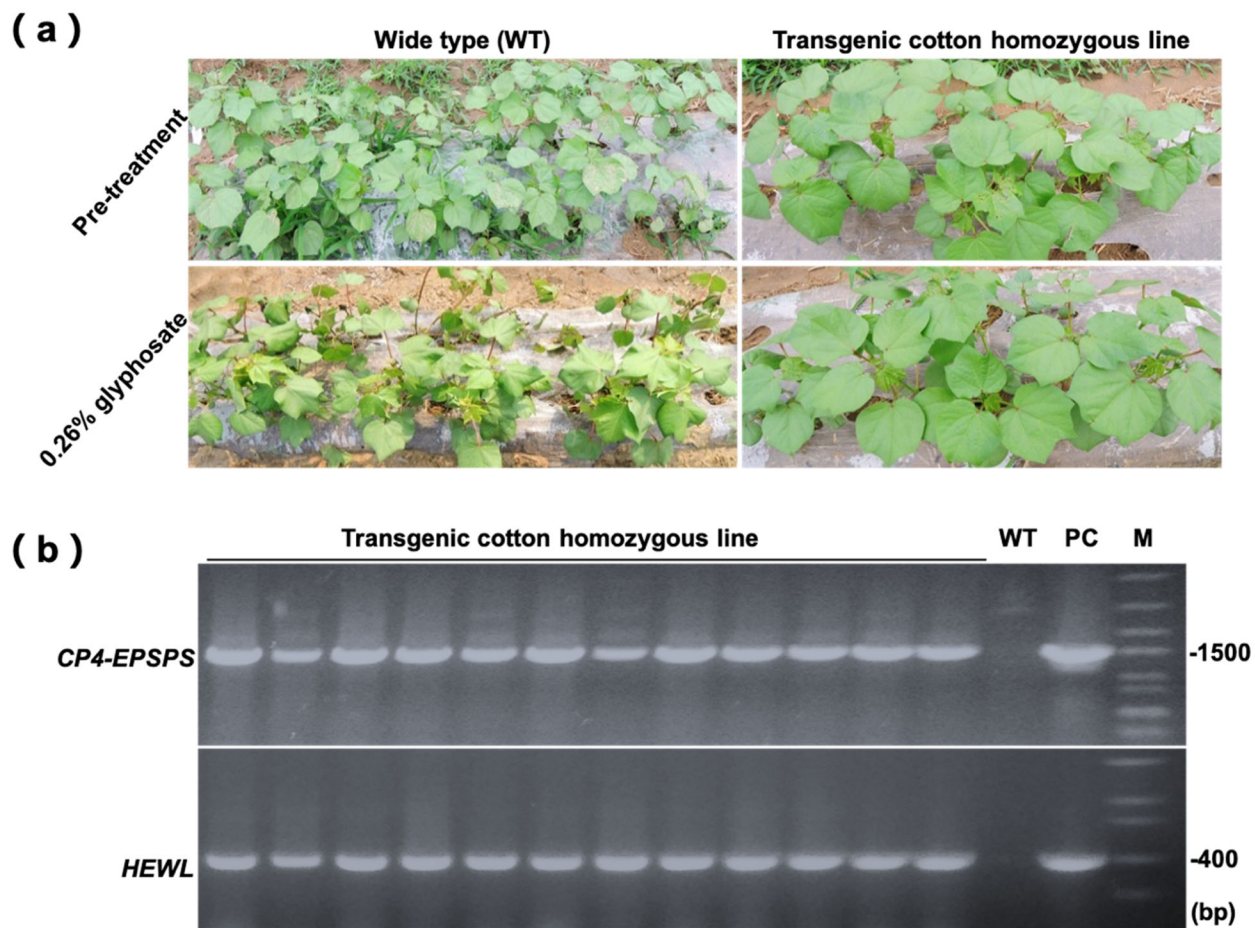


Figure S3. Identification of transgenic cotton homozygous line plants. (a) 0.26% glyphosate screening of transgenic cotton homozygous line. (b) PCR analysis of transgenic cotton homozygous line. WT: wild type; PC: plasmid as positive control.

Table S1. The primers used in this study.

Primers	Sequences (5'-3')	Purpose
CP4-F1	AGGATCCAACAATGGCACAATTAACAACATGGCACAAG	Vector construction
CP4-R1	ACTCGAGTTAGGCAGCCTTCGTATCGGAGAG	
HEWL-F1	CTCGAGATGAAAGTCTTTGGACGATGTGAGCTGG	Vector construction
HEWL-R1	GCGGCCGCTCAGCCGGCAGCCTCTGATCCACGC	
CP4-F2	ATGGCACAATTAACAACATGGCACAAG	Detection of target gene
CP4-R2	TTAGGCAGCCTTCGTATCGGAGAGTTCGATC	
HEWL-F2	AAAGTCTTTGGACGATGTGAGCTGGCAGCGGCTATGAAGC	Detection of target gene
HEWL-R2	GCCGTTTCCATCGCTGACGATCTTC	
CP4-F3	CTCGTCGGGGTCTACGATTTGACAGC	Southern blot
CP4-R3	TCAGGCAGCCTTCGTATCGGAGAGTTC	
GhActin-F	ATCCTCCGTCTTGACCTTG	qPCR (cotton reference gene)
GhActin-R	TGTCCGTCAGGCAACTCAT	
CP4-F	GTCTACGATTTGACAGCACC	qPCR
CP4-R	ACCGTCTTCCGATTTACACC	
HEWL-F	CTATGAAGCGTCACGGACTTG	qPCR
HEWL-R	CGGTGTTACGGTTTGTAGCCT	
Vd991-F	AAAGTTTTAATGGTTCGCTAAGA	qPCR
Vd991-R	CTTGGTCATTTAGAGGAAGTAA	
GhNPR1-F	TCAGTTTAGACAAGCCCGAGAA	qPCR
GhNPR1-R	CGTATGACCCTCTTTCAGTAGCA	
GhPR1-F	TGCTGTAAATATGTGGGTTAATGAG	qPCR
GhPR1-R	GAAATTGCCTGGAGGAGAATAG	
GhNOA1-F	GAGGATGCTGAAAGACCTGCTA	qPCR
GhNOA1-R	TCTCAACTGGCTTGGGTACATG	
GhHSR203J -F	GTGATAGCTCAGGAGGGAACAT	qPCR
GhHSR203J -R	CTAACTCGGACTTGCTTCGTTG	
GhHIN1-F	GCTGATGAGACATCGGAGTTTA	qPCR
GhHIN1-R	CTACCATTCCCAGTGTTCAAAG	
GhPFN2-F	ATGATGTCGTGGCAAGCTTACG	qPCR
GhPFN2-R	TCAATAACCCTGATCGAGG	
GhPDF1.2-F	CTGTGGTAGCGGATGGTGATAAG	qPCR
GhPDF1.2-R	GTGCAGACGCATTTGCCAAGGAA	