

Figure S1 Validity detection of Anti-Ab-FAR-1. (a) ELISA test results and data, antibody potency value $\geq 2.5 \times$ the negative value, the antibody potency value of Anti-Ab-FAR-1A and Anti-Ab-FAR-1B were greater than 512K; (b) The results of SDS-PAGE and Western blot analysis, SDS-PAGE (left panel) identified proteins from recombinant Ab-FAR-1 ^{Δ sp} of prokaryotic expression (rAb-FAR-1 ^{Δ sp}). M, Protein Marker; 1, Load sample; 2, Flow through; 3-6, Elution by 20 mM, 50 mM, 200 mM and 500 mM imidazole. Western blot analysis (right) the Ab-FAR-1 protein of *Arabidopsis thaliana* leaves infected (IL) and uninfected nematodes (UL).

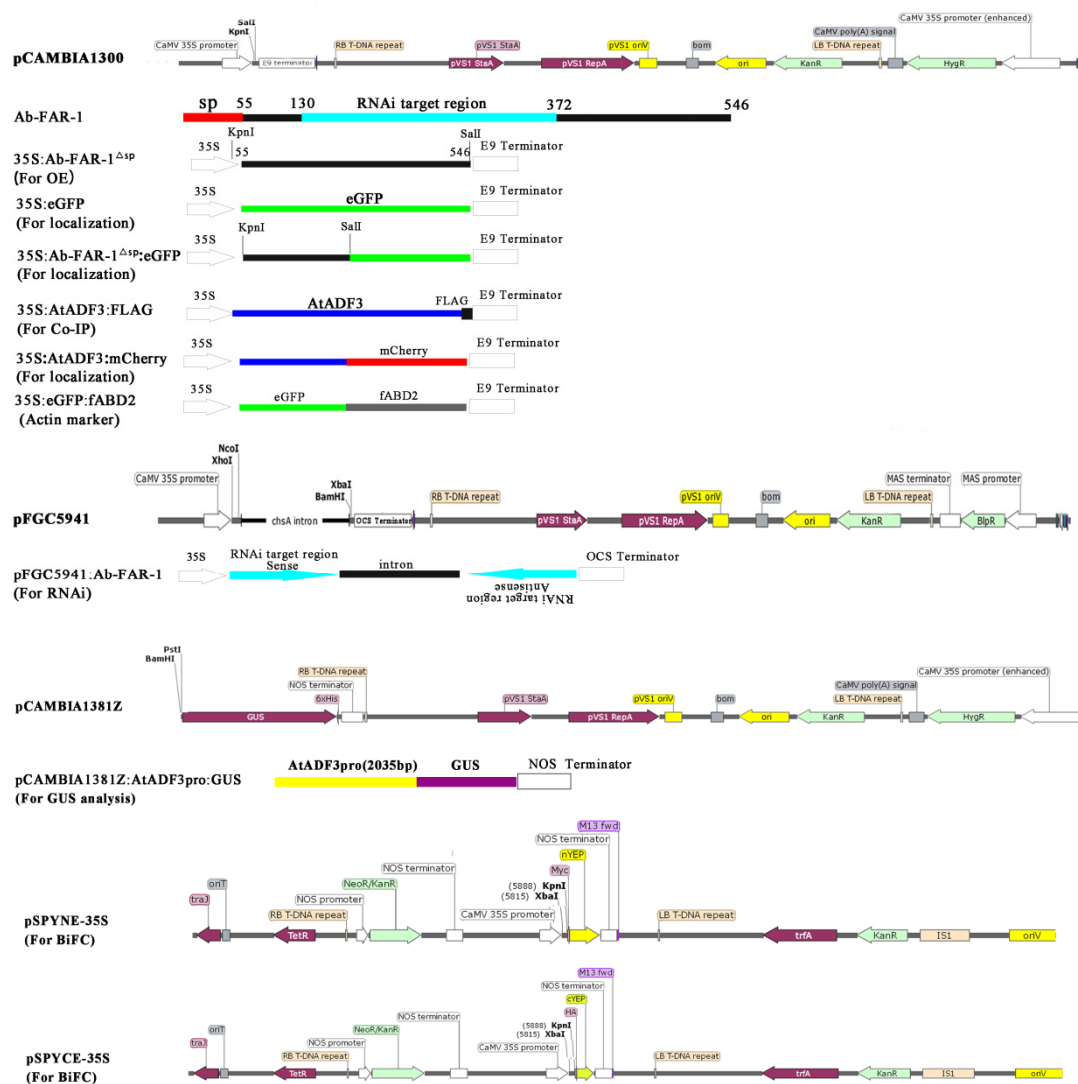


Figure S2 Schematic diagram of vector construction in this study.

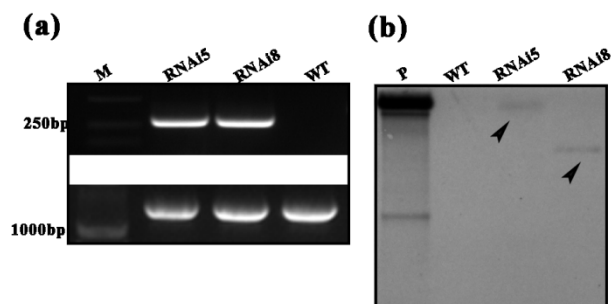


Figure S3 Molecular detection of *Ab-far-1* RNAi *Arabidopsis thaliana*. (a) Real-time quantitative PCR detection of *Ab-far-1* RNAi lines. (b) Southern blot of *Ab-far-1* RNAi lines. WT, Wild type Col-0 ecotype *A. thaliana*; RNAi5 and RNAi 8, *Ab-far-1* RNAi line 5# and 8#.

Table S1 Candidate proteins interact with Ab-FAR-1 that identified by Y2H.

Codes	NCBI Accession	NCBI Description
1, 5, 18, 21, 22, 25	NM_180896.3	Arabidopsis thaliana actin depolymerizing factor 3 (ADF3), mRNA
2	NM_001334174. 1	Arabidopsis thaliana branchless trichome (BLT), mRNA
3, 4, 9, 10, 11, 12, 13, 19, 23, 26, 28, 35, 36	NM_112521.4	Arabidopsis thaliana phytochrome-associated protein 1 (PAP1), mRNA
6	NM_120280.4	Arabidopsis thaliana E3 ubiquitin-protein ligase RLIM-like protein (SIS), mRNA
7	NM_125689.5	Arabidopsis thaliana RNA polymerase II, Rpb4, core protein (AT5G62950), mRNA
8	NM_105138.5	Arabidopsis thaliana with no lysine (K) kinase 10 (WNK10), mRNA
14	NM_179077.2	Arabidopsis thaliana S-adenosyl-L-methionine-dependent methyltransferases superfamily protein (ERD3), mRNA
15	NM_126596.4	Arabidopsis thaliana NagB/RpiA/CoA transferase-like superfamily protein (AT2G05830), mRNA
16, 30, 37	NM_118301.7	Arabidopsis thaliana DERLIN-2.1 (DER2.1), mRNA
17	AF088281.1	Arabidopsis thaliana phytochrome-associated protein 1 (PAP1) mRNA, complete cds
20	NM_115612.3	Arabidopsis thaliana seed imbibition 2 (SIP2), mRNA
24	AY080788.1	Arabidopsis thaliana putative phosphate/phosphoenolpyruvate translocator precursor protein (At5g33320) mRNA, complete cds
27	NM_124798.4	Arabidopsis thaliana plastid transcriptionally active 15 (PTAC15), mRNA
29	NM_124404.4	Arabidopsis thaliana chloroplast RNA-binding protein 31B (CP31B), mRNA
31	NM_001345120	Arabidopsis thaliana microtubule-associated proteins 65-1 (MAP65-1), mRNA
32	NM_127704.3	Arabidopsis thaliana B-box zinc finger family protein (BBX18), mRNA
33	LR782546.1	Arabidopsis thaliana genome assembly, chromosome: 5

34	LR782543.1	Arabidopsis thaliana genome assembly, chromosome: 2
38	NM_113511.6	Arabidopsis thaliana Plastid-lipid associated protein PAP / fibrillin family protein (AT3G26070), mRNA
39	NM_202725.1	Arabidopsis thaliana RING/U-box superfamily protein (AT3G58030), mRNA
40	AK226411.1	Arabidopsis thaliana mRNA for ferredoxin-NADP+ reductase (At5g66190), complete cds, clone: RAFL06-08-B20

Table S2. Primers in the study

Primer name	Primer sequence (5' to 3')	Primer use
35S-FAR1-eGFP-F	acgggggacgagctcggtaccATGGCCACTCTTCCGTTGAGC	pCAMBIA1300-35S:Ab-FAR-1 ^Δ sp :eGFP
35S-FAR1-eGFP-R	gcccttgctcaccatgtcgacGTTCTCTTGTTTGATAAGTCCTTGA	
35S-ADF3-m-F	gagaacacgggggactctagaATGGCTAATGCAGCATCAGGA	pBI121-35S:AtADF3:mcherry
35S-ADF3-m-R	aagggactgaccacccggggaGGCTCGGCTTTTGAA	
35S-FAR1-F	acgggggacgagctcggtaccATGGCCACTCTTCCGTTGAGC	pCAMBIA1300-35S:Ab-FAR-1 ^Δ
35S-FAR1-R	gcatggaagatcttctcgacTTAGTTCTCTTGTTTGATAAGTCCTTG	
Far1-RNAi-SF	tttgagaggacacgtcgagTACGCCGAACCTACCGATGAA	pFGC5941 (Sense, RNAi)
Far1-RNAi-SR	tcgattgggcgcgccccatggCAAGTCTGGCTTCTCTTCACCC	
Far1-RNAi-AF	ggtcttaattaactctctagaTACGCCGAACCTACCGATGAA	pFGC5941(Antisense, RNAi)
Far1-RNAi-AR	aatttgagggtatttgatccCAAGTCTGGCTTCTCTTCACCC	
PGBKT7-far1-F	atggccatggaggccgaattcGCCACTCTTCCGTTGAGCAT	pGBKT7:Ab-FAR-1 ^{Δsp} (Y2H)
PGBKT7-far1-R	ccgctgcaggctgcacggatccTTAGTTCTCTTGTTTGATAAGTCCTT	
pGADT7-ADF3-F	gtaccagattacgtcatatgATGGCTAATGCAGCATCAGGA	pGADT7:ATADF3(Y2H)
pGADT7-ADF3-R	atgccacccgggtggaattcATTGGCTCGGCTTTTGAA	
FAR1-SPYNE-F	acgggggacgagctcggtaccATGGCCACTCTTCCGTTGAGC	SPYNE-35S (BiFC)
FAR1-SPYNE-R	gcatggaagatcttctcgacTTAGGCCATGATATAGACGTTGTGG	
ADF3-SPYCE-F	acgggggacgagctcggtaccATGGCTAATGCAGCATCAGGA	SPYCE-35S (BiFC)
ADF3-SPYCE-R	gtacatccgggagcggtaccATTGGCTCGGCTTTTGAA	
ADF3pro-GUS-F	ttacgaattcccgggatccTAAATGAATTTTTTTTACGGGAC	pCAMBIA1381Z:AtADF3pro:GUS
ADF3pro-GUS-R	agtccaagcttggctgcagGTTGAATCAAAGCTAGTCTC	
fABD2-F	GATCCTCTTGAAAGAGCTGAAT	fABD2(actin marker gene)
fABD2-R	CTATTCGATGGATGCTTC	
Act1-F	ATGGCTGATGGTGAAGACATTCA	PCR detection
Act1-R	TCAGAAGCACTTCCTGTGAACAA	
hph-F	TGCGCCCAAGCTGCATCAT	PCR detection
hph-R	TGAACTCACCGCGACGTCTGT	
Hph-DIG-F	GTCTGCTGCTCCATACAA	Southern-blot probe
Hph-DIG-F	AAGGAATCGGTCAATACACT	
LBb1.3	ATTTTGCCGATTCGGAAC	PCR detection (mutant)
LP	TTTCAGCTTGCAGTCATCATG	
RP	TCAGAAGTTTGAAACAAACAGC	PCR detection (mutant)
ADF3-CF	GACTCCATTATTCTCCTGCTTC	
ADF3-CR	GCATCACTGAGTAATAGTACGA	RT-qPCR(<i>Ab-far-1</i>)
qPCR1-F	TCGCTCTTCTGTCTTGCCATG	
qPCR1-R	GATGGATTTGTCTTCATCGGTA	RT-qPCR(<i>Ab-far-2</i>)
qPCR2-F	TATCCCGATGCTATGGAAACG	
qPCR2-R	TTTCGTCTTTGGGTTTGATGT	

qPCR3-F	TGCCCCGAAGACTTGCTCGATTTCT	RT-qPCR(<i>Ab-far-3</i>)
qPCR3-R	TCGCCATCATTGCCGTTTCATTGC	
qPCR4-F	ACATCCCATTGGCTATTTCCC	RT-qPCR(<i>Ab-far-4</i>)
qPCR4-R	CATTTCGATCCGTGCTTCTTGA	
qPCR5-F	CACCTTGCTGGAATTGCCTGAAGA	RT-qPCR(<i>Ab-far-5</i>)
qPCR5-R	CCACCACACTTCTCAGTTGCTTCC	
qPCR6-F	GCAACAGAAGTTTGTGGCTCAACG	RT-qPCR(<i>Ab-far-6</i>)
qPCR6-R	CGGCGAATCGACGGAATGTGATG	
qPCR7-F	GGAGGAAATCGTGCCTAAGGAAGT	RT-qPCR(<i>Ab-far-7</i>)
qPCR7-R	TTGCCGAGAACCTGTTGAAGAACC	
qPCR8-F	CGACAGCCAATCCGACTCAACCAA	RT-qPCR(<i>Ab-far-8</i>)
qPCR8-R	CAAGACCAGCGGGCGAGTTCAA	
Ab-18S-F	CCGAAAGGAGATGGCAAAC	RT-qPCR(<i>Ab-18S</i>)
Ab-18S-R	ACAAAGGGCAGGGACGTAA	
Ab-ubc-F	CACAACTATCCCTACGAACCAC	RT-qPCR(<i>Ab-ubc</i>)
Ab-ubc-R	AGCGAAATAACACTCAACAAGA	
<i>AtFRK1</i> -F	GGGTCAGATTTCAACAGTTGTC	RT-qPCR
<i>AtFRK1</i> -R	AATAGCAGGTTGGCCTGTAATC	
<i>AtPHI1</i> -F	TTGGTTTAGACGGGATGGTG	RT-qPCR
<i>AtPHI1</i> -R	ACTCCAGTACAAGCCGATCC	
<i>AtWRKY33</i> -F	GTGATATTGACATTCTTGACGA	RT-qPCR
<i>AtWRKY33</i>	GATGGTTGTGCACTTGTAGTA	
<i>AtNHL10</i> -F	TTCCTGTCCGTAACCCAAAC	RT-qPCR
<i>AtNHL10</i> -R	CCCTCGTAGTAGGCATGAGC	
<i>AtCYP81F2</i> -F	AAATGGAGAGAGCAACACAATG	RT-qPCR
<i>AtCYP81F2</i> -R	ATCGCCCATCCAATGTTAC	
<i>AtUBP22</i> -F	GCCAAAGCTGTGGAGAAAAG	RT-qPCR (Reference gene)
<i>AtUBP22</i> -R	TGTTTAGGCGGAACGGATAC	