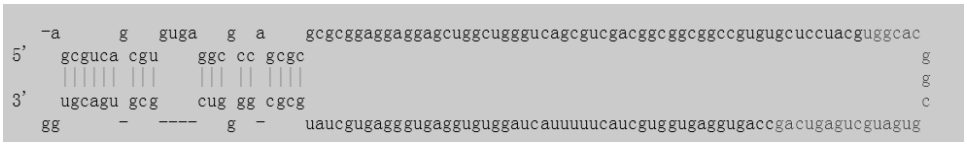
Appendix A PCR primers used in this study

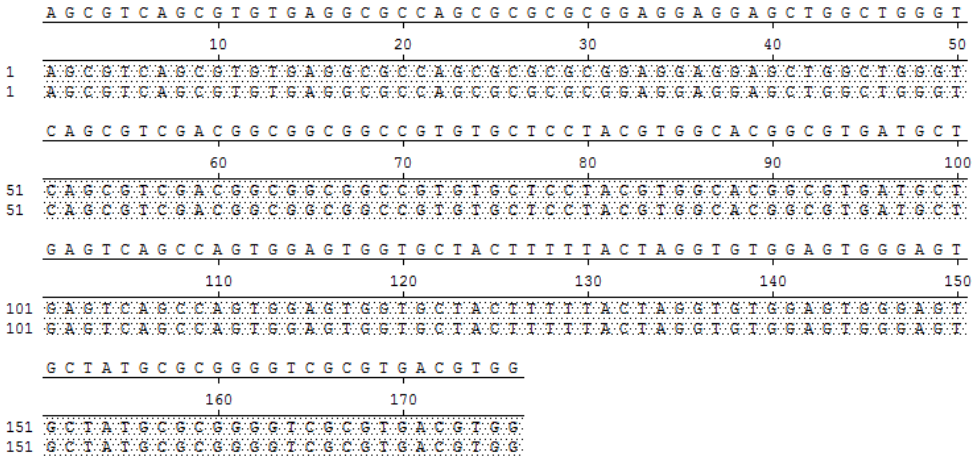
Purpose	Accession number	Forward primer (5´-)	Reverse primer (5´-)
NtMIR1119 expression	MI0006181	AGCGUCAGCGUGUGAGGC	CCACGTCACGCGACCCCGC
Tatubulin expression	U76558	CATGCTATCCCTCGTCTCGACCT	CGCACTTCATGATGGAGTTGTAT
Nttubulin expression	U91563	TACACAGGGGAAGGAATGG	CTCGAAACCAACGGTATC
TabHLH49	XM_020294420	GGCTTGACCTCAACATAGAAG	GTACTCGTGCAGGTGGAGATT
TaLZ	XM_020312111	TGTCCAACAGGGAGTCGGCC	TCCTATGGGTGACCAAGGCC
TaPCF	XM_010236026	GTGGGGGAATGGTTAAGAGCA	TGGGTCGTTCTGGCACTGGT
TaCS	XM_003569426	ACACAGATATGAGGTGAACCC	ATCCATCATCATGTTCTCAAGG
TaMNT	XM_020325679	CATCGGCGTCTCCATGATCCT	TATAACTTGGTTAACCTACACG
TaGT	XM_020302607	CTAGCAGTCAAGTCAAGCACC	TTATGCCGTGCCGAACAGAG
NtMIR1119 overexpression cassette	MI0006181	AAACCATGGAGCGUCAGCGUGUGAGG	AAAGGTAACCACGTCACGCGACCCCGC
NtMnSOD1 expression	X14482	TTGGGCTATCGACACTAACTTT	TCAGCCAGCGACTACATGCA
NtMnSOD2 expression	AB093097	GACGGACCTTAGCAACAGGG	ACCAATGGGTCCTGATTAGCAG
NtSOD1 expression	KJ874395	GTGGACATGTCGTGTCAAGG	TTCTCACCAACTCCTGCACTT
NtSOD2 expression	EU123521	ATGTCACGGGACCACATTAC	AACCCTTCCACCAGCATTTC
NtFeSOD expression	KF724056	CATCACAGAGCTTATGTCGACA	CTAGAACTGACTGCTTCCCA
NtCAT expression	EF532799	CAAGGATCTCTACGACTCGATT	CTTGAGGGCAAATAATCCACCT
NtCAT1 expression	NTU07627	GTCTCAGGCTGACAAGTCTT	ACGGAAGACAGAGTAGCAGC
NtCAT3 expression	HF564633	GTCTTGGGCCAAACTATCTGCA	TCAGCTTCACATTGTGGGCC
NtCAT1;1 expression	NTU93244	TCCTGCTAATGCTCCAAAGTGT	AATGCATATGTATTAGGAATGCTC
NtCAT1;2 expression	HF564632	GGTATCGACTTGGACCAAACTA	GGTCTCACATTAAGCCTAGAAG
NtCAT1;3 expression	HF564631	TTGCAGCCGGTGGGAAGATT	GGTCTCACATTAAGCCTAGAAG
NtPOD1;1 expression	L02124	GGAATTTGTCCTCAAGGTGGAA	CTTATTGGAATTGCCATTTCAGC
NtPOD1;2 expression	AB044154	CTGACATGGTCTGTGCCTAC	TCAGTTGATAGCAGAGCAAACTT
NtPOD1;3 expression	AB044153	AAGATCTTGTCGCTCTTACTGG	AATTGGATTTTCCAGCTTGCG
NtPOD1;4 expression	D11396	TGCTGGTAGTCAAAGTCAGTTTT	CCCATGTTGAACACGTTCTTACC
NtPOD1;5 expression	AB178953	AACAGCAACAACGTTAACCCAGC	TTAATTTTGGACCACATTCAGGA
NtPOD1;6 expression	AB027753	TCAACTCCACTGGTGGCCCT	AATTCGATTTTGCAGCTTGCGC
NtPOD1;7 expression	AB027752	GCCCAAGAAGTTCAGGCTCA	ATACAAATACAGTCCTTTACTCG

NtPOD2;1 expression	AB178954	AGGGGAAAAGACCTCACCAC	AGTTTCCCATCTTGATCATAGCA
NtPOD2;2 expression	KF701483	AGACAGTGAGTATGCAGCTAA	AAAAAAGCTGCCCTTGGCACC
NtPOD4 expression	AY032675	AGACTCAAAGATAGCAAACCTCA	CTTCCTGATGTCACCCTTGA
NtPOD9 expression	AY032674	CACCACCTTCATTCAACGCTA	ACATCTCAGACAAAACACTTGTC

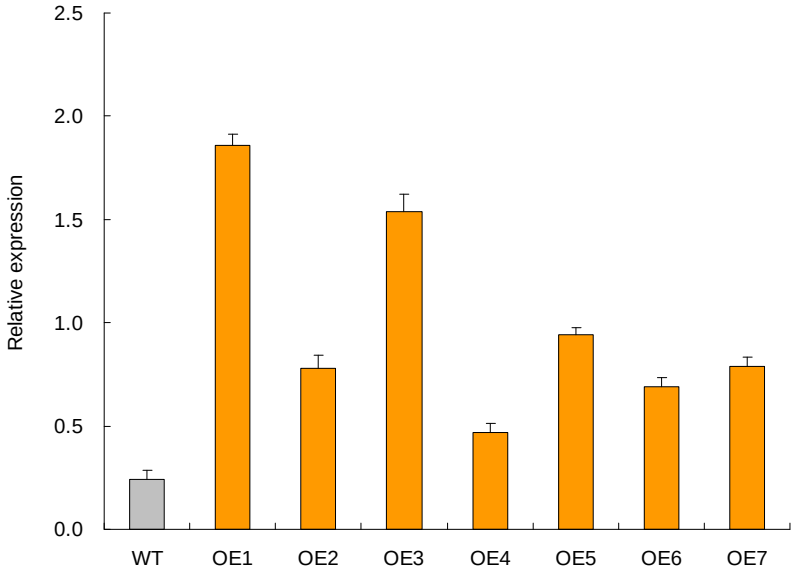
A



B



Appendix B Characterization of TaMIR1119. A, a secondary stem-loop structure initiated by the TaMIR1119 precursor. B, alignment result between TaMIR1119 and its ortholog NtMIR1119 in tobacco.



Appendix C Expression levels of the target gene in tobacco lines with TaMIR1119 overexpression OE1 to OE7, seven lines with TaMIR1119 overexpression; WT, wild type. Data are normalized by internal standard and shown by average plus standard error.