Supplementary materials

Genes	Full names
TwHMGR1	3-hydroxy-3-methylglutaryl- coenzyme A reductase gene
TwHMGS	3-hydroxy-3-methylglutaryl-coenzyme A synthase gene
TwDXR	1-deoxy-d-xylulose-5-phosphate reductoisomerase gene
TwDXS1/2	1-deoxy-d-xylulose 5-phosphate synthase genes
TwHDR	4-hydroxy-3-methylbut-2-enyl diphosphate reductase gene
TwIDI	isopentenyl pyrophosphate isomerase gene
<i>TwGGPPS1/4/8</i>	geranylgeranyl diphosphate synthase genes
TwTPS7/7v2/9/9v2	normal-copalyl diphosphate synthase genes
<i>TwTPS27/27v2</i>	miltiradiene synthase genes
<i>TwCYP728B70</i>	cytochrome P450 gene

Table S1. Full names of several functional pathway genes in triptolide biosynthesis

Table S2. The numbers of various E-box motifs in the protential promoter sequences of *TwTPS7*, *TwTPS9*, *TwDXR*, and *TwHMGR1* (2000 bp nucleotides upstream of their start condon ATG).

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Name	E-box	Numbers of E-box				
	Sequences	TwTPS7	TwTPS9	TwDXR	TwHMGR1	
E1	CAGATG/CATCTG	1	0	1	0	
E2	CACATG/CATGTG	3	2	2	2	
E3	CAAATG/CATTTG	2	4	2	3	
E4	CACGTT/AACGTG	0	0	0	1	
E5	CAATTG	1	2	2	0	
E6	CATATG	1	3	0	2	
E7	CAACTG/CAGTTG	1	0	1	1	
E8	CAAGTG/CACTTG	1	1	1	1	
E9	CAGGTG/CACCTG	0	1	1	0	
E10	CAGCTG	0	0	0	1	
G-box	CACGTG	0	0	0	2	
Total		10	13	10	13	

Note: These patyway genes *TwTPS7*, *TwTPS9*, *TwDXR*, and *TwHMGR1* are located in the chromosome of 21, 21, 18, and 7, respectively. The 2000 bp nucleotides upstream of their start condon ATG in their genomic sequences were analyzed as the potential promoter sequence.

Primers Sequence (5' to 3') 5/3'-RACE PCR
5/3-RACE PCR MYC2-5'-R1-1066 GACCAACGATTTGGGATATGGACTC MYC2-3'-F1-1192 TTTGGGGAGAGTAAGAGACTAACAGACTA MYC2-3'-F2-1578 TGCTGTTGTTCCTAATGTGTCCAAGATG Full-length CD5 PCR
$\begin{array}{llllllllllllllllllllllllllllllllllll$
MYC2-3*-R2-795 GCCACCACCATTACTGAAATTGAACA MYC2-3*-F1-1192 TTTGCGGAGAGTAAGAGGACTGCTACCA Full-length CDS PCR
MYC2-3'-FI-1192 TTGCGGAGACTAAGAGGACTGCTACCA MYC2-3'-F2-1578 TGCTGTTGTTCCTAATGTGCCAAGATG Full-length CDS PCR
$\begin{array}{c c c c c c c c c c c c c c c c c c c $
Full-length CDS PCR MYC2a-F ATGACGGACTACCGGCTCCCAGTAT MYC2b-F CCGGTGCATGAAATGACGGACTA MYC2b-F CCGGTGCATGAAATGACGGACTA MYC2b-R GTCCTATCGAGAATCACCAATCCTGGG Construction of the subcellular localization vectors MYC2a-sub-F MYC2a-sub-R TCCTCGCCCTTGCTCACCATGGTACCCCGAGCACCAACCCTGG MYC2a-sub-R TCCTCGCCCTTGCTCACCATGGTACCCCGAGCACCAACCCTGG MYC2b-sub-F AGATTTATAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
$\begin{array}{rcrcrc} MYC2a-F & ATGACGGACTACCGGCTCCCAGTAT \\ MYC2a-R & TTACCGAGCACCAACCCTGGATTGT \\ MYC2b-F & CCGGTGCATGAAATGACGGACTA \\ MYC2b-R & GTCCTATCGAGAATCACCAATCCTGG \\ \hline \hline \\ \hline \\ Construction of the subcellular localization vectors \\ \hline \\ MYC2a-sub-F & AGATTTATAAAAAAAAAAAAAAAAAGAATTCATGACGGACTACCGGGTCC \\ MYC2a-sub-F & ACATTTATAAAAAAAAAAAAAAAAAAAAAAAAAAAAA$
$\begin{array}{rcrcr} MYC2a-R & TTACCGAGCACCAACCCTGGATTGT \\ MYC2b-F & CCGGTGCATGAAATGACGGACTA \\ MYC2b-R & GTCCTATCGACAATGCACGACTACCGG \\ \hline Construction of the subcellular localization vectors \\ \hline MYC2a-sub-F & AGATTTATAAAAAAAAAAAAAAAAAAAAAAAAAAAAA$
MYC2b-F CCGGTGCATGAAATCACGGACTA MYC2b-R GTCCTATCGACAATCACCAATCCTGG Construction of the subcellular localization vectors MYC2a-sub-F MYC2a-sub-F AGATTTATAAAAAAAAAAAAAAAAAAAAAGCAATTCATGACGGACTACCGGCTCC MYC2b-sub-F AGATTTATAAAAAAAAAAAAAAAAAAAAAAACGAATTCATGACGGACTACCGGCTAC MYC2b-sub-F AGATTTATAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
MYC2b-RGTCCTATCGAGAATCACCAATCCTGGConstruction of the subcellular localization vectorsMYC2a-sub-FAGATTTATAAAAAAAAAAAAAAAAAAAAAAAAGAATTCATGACGGACTACCGGCTCCMYC2a-sub-RTCCTCGCCCTTGCTCACCATGGTACCCCGAGCACCAACCCTGGMYC2b-sub-RTCCTCGCCCTTGCTCACCATGGTACCMYC2b-sub-RTCCTCGCCCTTGCTCACCATGGTACCgRT-PCREF1a-FCCAAGGGTGAAAGCAAGGAGAGCFF1a-RCCAAGGGTGGATTGAGGCTGGTATCTMYC2a-q-FCTGAACTAAGGAAAATAGGATCGGMYC2a-q-FCTGAACTAAGGAAAATAGGATCGCMYC2a-q-RTAACAGAAGGATGGCCAATACAAAAMYC2b-q-RGGAACAGTGAAGCAAGGAATCCCTwTPS27a/b-q-FATGAATCAACGGCCCTTGACTTwTPS7/9-q-FGCTAGAAAAAAGACGATTCCGAGCTwTPS7/9-q-FGCTAGAAAAAGACGATTCCCAGGCTwTPS7/9-q-FCATGTTTGAACCTGCTGGACCTwTPS7/9-q-FGCTAGAAAAAGACGATTCCCAGGCTwDXR-q-FCATGTTTGAACCTGCTGGGGTwDXR-q-FTCAAGGATTGCCAAGGGGGATCTwDXR-q-FTCAAGGATTGCCAAGGGGG3×E2-AbAi-HindIII-AGCTTATTCACATGTAAATTCACATGTAAATTCACATGTAAC3×E2-AbAi-HindIII-AGCTTATTCACATGTAAATTCACATGTAAATTCACATGTAAAT3×E4-AbAi-HindIII-AGCTTATCACATGTAAATTCACATGTAAATTCACATGTAAAT3×E4-AbAi-HindIII-TCGACTTACATGTGAATTTACATCTGAATATA3×E4-AbAi-HindIII-CGCATGGAGGCCAGTGACTCACCGTAGCGACTACCGGCTCCMYC2a-AD-FGCCATGGAGGCCAGTGAATTCATGACGACATCACCTTAGACConstruction of prey vectorsMYC2a-AD-FMYC2a-AD-FGCCATGGAGGCCAGTGAATTCATGACGAGCTACCGGCTCCMYC2b-AD-FGCCATGGAGGCCAGTGAATTCATGACGGACTACCGCTCCMYC2b-AD-F
$ \begin{array}{c c} \hline Construction of the subcellular localization vectors \\ \hline MYC2a-sub-F & AGATTTATAAAAAAAAAAAAAAAAAAAAAAAAAAAACGAATTCATGACGGACTACCGGCTCC \\ \hline MYC2a-sub-R & TCCTCGCCCTTGCTCACCATGGTACCCCGAGCACCAACCCTGG \\ \hline MYC2b-sub-R & TCCTCGCCCTTGCTCACCATGGTACCTCGAGAATCACCAATCCTGG \\ \hline qRT-PCR & CCAAGGGTGAAAGCAAGGAGAGC \\ \hline EF1a-F & CCAAGGGTGTTTGAAGCTGGTATCT \\ \hline MYC2a-q-F & CTGAACTAACGGAAAATAGGATCGG \\ \hline MYC2a-q-F & CTGAACTAACGGAAAATAGGATCGG \\ \hline MYC2b-q-R & TAACAGAAGGATGGCCAATACAAAA \\ \hline MYC2b-q-F & AGCTGAACTAACGGAAAATACGATCCC \\ \hline MYC2b-q-R & GGAACAGTGAAGCAAGGAGGATTACC \\ \hline TwTPS27a/b-q-F & ACCTGAACTAACGGCAATACCAAAA \\ \hline MYC2b-q-F & GCTAAACGAAGCAGGACTTC \\ \hline TwTPS27a/b-q-F & ATGAATCAACGGCCCTTGACT \\ \hline TwTPS7/9-q-F & GCTAGAAAAAAAAAAAGCCGATTCCGAGGC \\ \hline TwTPS7/9-q-F & GCTAGAAAAAAGCCGATTCCGAGGACT \\ \hline TwHMGR1-q-F & CATGTTTGAACCTGCTGGAGG \\ \hline TwHMGR1-q-F & CATGTTTGAACCTGCTGGAGG \\ \hline TwDXR-q-F & TCAAGGATTGCCAAGAGTGGCGAATC \\ \hline TwDXR-q-F & TCAAGGATTGCCAAGGGGG \\ \hline TwDXR-q-F & TCAAGGATTGCCAGAGGG \\ \hline TwDXR-q-F & TCAAGGATTGCCAGAGGG \\ \hline TwDXR-q-F & TCAAGGATTGCCAGAGGG \\ \hline Se2-AbAi-HindIII- & AGCTTATTCACATGTAAATCACATGTAAATTCACATGTAAAT \\ \hline F & AGCTTCATCACATGTAAATTCACATGTAAATTCACATGTAAAT \\ \hline AGCTTCATCACATGTAGAATTACATGTGAATTTACATGTGAATA \\ \hline S*E4-AbAi-HindIII- & AGCTTCATCCACGTTAGACATCACCGTTAGGAC \\ \hline TwDXR-q-F & TCGAGTTACCATGTAAATTCACATGTAAATTCACATGTAAAT \\ \hline S*E4-AbAi-HindIII- & AGCTTCATCCACGTAGACATCACCGTTAGACAT \\ \hline S*E4-AbAi-HindIII- & AGCTTCATCCACGTAGACATCACCGTAGACATCACCGTAGAC \\ \hline TCGAGTTACTACCATGTAAATTACATGTGAATTTACATGTGAATA \\ \hline S*E4-AbAi-HindIII- & AGCTTCATCCACGTAGACATCACCGTAGACATCACCGTAGAC \\ \hline TCGAGTTCATCCACGTAGACATCACGTAGACATCACCGTAGAC \\ \hline MYC2a-AD-F & CCCATGGAGCCAATCCACGTTACCGGACTACCGGCTCC \\ MYC2a-AD-F & CCCATGGAGCCAATCCACGTTACCGAGCTACCCGCTCC MYC2a-AD-F & CCCATGGAGCCAACCCACCCCCGGGCCCACCCCCCCACCCCCGGCCCACCCCCC$
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MYC2b-sub-FAGATTTATAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
MYC2b-sub-RTCCTCGCCCTTGCTCACCATGGTACC $qRT-PCR$ EF1a-FCCAAGGGTGAAAGCAAGGAGAGCEF1a-RCACTGGTGGTTTTGAGGCTGGTATCTMYC2a-q-FCTGAACTAAGGGAAAATAGGATCGGMYC2a-q-RTAACAGAAGGATGGCCAATACAAAAMYC2b-q-RGGAACAGTGAAGGAGGAGATTACCMYC2b-q-RGGAACAGTGAAGCAGGGCCTTGACTTwTPS27a/b-q-FATGAATCAACGGCCCTTGACTTwTPS7/9-q-FGCTAGAAAAAGAGAATGGCGAATCTwTPS7/9-q-FGCTAGAAAAAGACGATTCCGAGCTwTPS7/9-q-RATAGCTTGCAAGAATGGCGAATCTwHMGR1-q-FCATGTTTGAACTGCTGGGGTwDXR-q-FTCCAAGGATTGCCAGAGGGTwDXR-q-RATGAATGATAGACTGCCGGATGConstruction of bait vectors3×E2-AbAi-HindIII- FAGCTTCATCACATGTAAATTCACATGTAAATTCACATGTAAAT3×E4-AbAi-XhoI-RTCGAGTTACCATGTAAATTCACATGTAGACATCACGTTAGAC F AGCTTCATCACGTTAGACATCACGTAGACATCACGTTAGAC $TS2-AbAi-HindIII-$ FAGCTTCATCACGTAGACATCACGTAGACATCACGTTAGAC $TCGAGTTAACATGTAAATTCACATGTAAATTCACATGTAAATTCACATGTAAAT3×E4-AbAi-XhoI-RTCGAGTTACCGTAGACATCACGTTAGACATCACGTAGACTVC2a-AD-FGCCATGGAGGCCAGTGAATTCATGACGGACTACCGGCTCCMYC2a-AD-FGCCATGGAGGCCAGTGAATTCATGACGGACTACCGGCTCCMYC2a-AD-FGCCATGGAGGCCAGTGAATTCATGACGACTACCGGCTCCMYC2b-AD-FGCCATGGAGGCCAGTGAATTCATGACGACTACCGGCTACCMYC2b-AD-FGCCATGGAGGCCAGTGAATTCATGACGACTACCGGCTACMYC2b-AD-FGCCATGGAGGCCAGTGAATTCATGACGACTACCGGCTACCMYC2b-AD-FGCCATGGAGGCCAGTGAATTCATGACGACTACCGGCTACCMYC2b-AD-FGCCATGGAGGCCAGTGAATTCATGACGACTACCGGCTACCMY$
qRT-PCREF1a-FCCAAGGGTGAAAGCAAGGAGAGCEF1a-RCACTGGTGGTTTTGAGGCTGGTATCTMYC2a-q-FCTGAACTAAGGAAAATAGGATCGGMYC2a-q-RTAACAGAAGGATGGCCAATACAAAAMYC2b-q-RGGAACAGTGAAGCAGGGATTACCTwTPS27a/b-q-FAGCTGAACTAACGGCCCTTGACTTwTPS27a/b-q-FGCAAGCAGGAAAAGCGATTCCTwTPS7/9-q-FGCTAGAAAAAGACGATTCCGAGCTwTPS7/9-q-FGCTAGAAAAAGACGATTCCTwHMGR1-q-FCATGTTTGAACCTGCTGCAGGGTwDXR-q-FTCCAAGGATTGCCAGGGGTwDXR-q-RGGCTTTTCACAAGCTGCCGGGGGTwDXR-q-RATGAATGACGCGGATGConstruction of bait vectors3×E2-AbAi-HindIII- FAGCTTCATCACGTTAGACATCACGTTAGACATCACGTTAGACATCFAGCTTCATCACGTTAGACATCACGTTAGACATCACGTTAGACFAGCTTCATCACGTTAGACATCACGTTAGACATCACGTTAGACS×E2-AbAi-HindIII- FAGCTTCATCACGTTAGACATCACGTTAGACATCACGTTAGACS×E4-AbAi-HindIII- FAGCTTCATCACGTGAGCATCACGTTAGACATCACGTTAGACMYC2a-AD-FGCCATGGAGGCCAGTGAATTCATCACGGGACTACCGGCTCC MYC2b-AD-FMYC2a-AD-FGCCATGGAGGCCAGTGAATTCATGACGGACTACCGGCTACMYC2b-AD-FGCCATGGAGGCCAGTGAATTCATCACGGCACTACCGGCTACMYC2b-AD-FGCCATGGAGGCCAGTGAATTCATCACGGACTACCGGCTAC
$\begin{array}{rcrcrc} & \mbox{EF1}a-F & \mbox{CCAAGGGTGAAAGCAAGGAGAGC} \\ & \mbox{EF1}a-R & \mbox{CACTGGTGGTTTTGAGGCTGGTATCT} \\ & \mbox{MYC2a-q-F} & \mbox{CTGAACTAAGGGAAAATAGGATCGG} \\ & \mbox{MYC2b-q-R} & \mbox{TAACAGAAGGATGCCCAATACAAAA} \\ & \mbox{MYC2b-q-F} & \mbox{AGCTGAACTAAGGGAAAATCGC} \\ & \mbox{MYC2b-q-F} & \mbox{AGGAACAGTGAAGCAGGATTACC} \\ & \mbox{TwTPS27}a/b-q-R & \mbox{TCCTAATGCGTGCATCGACTC} \\ & \mbox{TwTPS7}/9-q-F & \mbox{ACTGCAGAATAGGGAATGCCAGAGC} \\ & \mbox{TwTPS7}/9-q-R & \mbox{TCCTAATGCTGCAAGAATGGCGAATC} \\ & \mbox{TwHMGR1-q-F} & \mbox{CATGTTTGAACTGCTTGGGG} \\ & \mbox{TwHMGR1-q-R} & \mbox{GGCTTTTCACAAGCTGTCCAG} \\ & \mbox{TwDXR-q-F} & \mbox{TCAAGGATTGCCAGGGGG} \\ & \mbox{TwDXR-q-R} & \mbox{AGCATTGCCAGGGGG} \\ & \mbox{TwDXR-q-R} & \mbox{AGCATTGCAAGACTGCGGATG} \\ \\ & \mbox{Construction of bait vectors} \\ & \mbox{3×E2-AbAi-HindIII-} & \mbox{AGCTTACATGTAAATTCACATGTAAATTCACATGTAAAT} \\ & \mbox{F} & \mbox{AGCTTCACATGTAAATTCACATGTAAATTCACATGTAAAT} \\ & \mbox{AGCTTCATCACGTTAGACATCACGTTAGACATCACGTTAGAC} \\ & \mbox{Construction of prey vectors} \\ \\ & \mbox{MYC2a-AD-F} & \mbox{CCATGGAGGCCAGTGAATTCACGGACTACCGGCTCC} \\ & \mbox{MYC2a-AD-F} & \mbox{ACCATGGAGGCCAGTGAATTCACGGACTACCGGCTCC} \\ & \mbox{MYC2a-AD-F} & \mbox{ACCATGGAGGCCAGTGAATTCACGGACTACCGGCACCACCCTGG} \\ & \mbox{MYC2b-AD-F} & \mbox{ACCATGGAGGCCAGTGAATTCACGGACTACCGGCTAC} \\ & \mbox{MYC2b-AD-F} & \mbox{ACCATGGAGGCCAGTGAATTCACGGACTACCGGCTAC} \\ & \mbox{MYC2a-AD-F} & \mbox{ACCATGGAGGCCAGTGAATTCATCGAGCACCAACCCTGG} \\ & \mbox{MYC2b-AD-F} & \mbox{ACCATGGAGGCCAGTGAATTCATGACGGACTACCGGCTAC} \\ & \mbox{MYC2b-AD-F} & \mbox{ACCATGGAGGCCAGTGAATTCATCGAGCACCAACCCTGG} \\ & \mbox{MYC2b-AD-F} & \mbox{ACCATGGAGGCCAGTGAATTCATCGAGCATCACCGGCACCAACCCTGG} \\ & \mbox{MYC2b-AD-F} & \mbox{ACCATGGAGGCCAGTGAATTCATCGAGCACAACCCTGG} \\ & \mbox{MYC2b-AD-F} & \mbox{ACCATGGAGGCCAGTGAATTCATCGAGCACCAACCCTGG} \\ & \mbox{MYC2b-AD-F} & \mbox{ACCATGGAGGCCAGTGAATTCATCGAGCACCAACCCTGG} \\ & \mbox{MYC2b-AD-F} & ACCATGGAGGCCAGTGAATTCATGCAGGACTACCGGCCACCACCCAC$
EF1a-RCACTGGTGGTTTTGAGGCTGGTATCTMYC2a-q-FCTGAACTAAGGGAAAATAGGATCGGMYC2b-q-FTAACAGAAGGATGGCCAATACAAAAMYC2b-q-FAGCTGAACTAAGGGAAAATCGCMYC2b-q-RGGAACAGTGAAGCAGGATTACCTwTPS27a/b-q-RTCCTAATCGCTGCATCGACTCTwTPS7/9-q-FGCTAGAAAAAGACGATTCCGAGCTwTPS7/9-q-RTCCTAATCGCTGCATCGACTCTwHMGR1-q-FCATGTTTGAACCTGCTGCGGGTwDXR-q-FTCAAGGATTGCCAAGAAGCGGGCTwDXR-q-RAGCTTATCACAGCTGCCGAGCTwDXR-q-RAGCTTATTCACAAGCTGCCGAGGG3×E2-AbAi-HindIII- FAGCTTATTCACATGTAAATTCACATGTAAATTCACATGTAACCFTCGAGTTACATGTAGACTTGCGAATTTACATGTGAATA3×E4-AbAi-HindIII- FAGCTTCATCACGTTAGACATCACGTTAGACATCACGTTAGACFTCGAGTCTAACGTGATGTCAACGTTAGACATCACGTTAGACS×E4-AbAi-Khol-RTCGAGTCTAACGTGATGTCTAACGTGATGTCAACGTAGACConstruction of prey vectorsMYC2a-AD-FMYC2a-AD-FGCCATGGAGGCCAGTGAATTCATGTGAACTACCGGGCTCCMYC2a-AD-FGCCATGGAGGCCAGTGAATTCATGACGGACTACCGGCTCCMYC2a-AD-FGCCATGGAGGCCAGTGAATTCATGACGGACTACCGGCTACMYC2a-AD-FGCCATGGAGGCCAGTGAGTTACCGAGCACCAACCCTGGMYC2b-AD-FGCCATGGAGGCCAGTGAATTCATGACGGACTACCGGCTACMYC2b-AD-FGCCATGGAGGCCAGTGAATTCATGACGGACTACCGGCTACMYC2b-AD-FGCCATGGAGGCCAGTGAATTCATGACGGACTACCGGCTACMYC2b-AD-FGCCATGGAGGCCAGTGAATTCATGACGGACTACCGGCTACMYC2b-AD-FGCCATGGAGGCCAGTGAATTCATGACGGACTACCGGCTACMYC2b-AD-FGCCATGGAGGCCAGTGAATTCATGACGGACTACCGGCTACMYC2b-AD-FGCCATGGAGGCCAGTGAATTCATGACGACTACCGGCTAC<
MYC2a-q-FCTGAACTAAGGGAAAATAGGATCGGMYC2a-q-RTAACAGAAGGATGGCCAATACAAAAMYC2b-q-FAGCTGAACTAAGGGAAAATCGCMYC2b-q-RGGAACAGTGAAGCAGGATTACCTwTPS27a/b-q-FATGAATCAACGGCCTTGACTTwTPS27a/b-q-RTCCTAATCGCTGCATCGACCTwTPS7/9-q-FGCTAGAAAAAGACGATTCCGAGCTwTPS7/9-q-FGCTAGAAAAAGACGATTCCGAGCTwHMGR1-q-FCATGTTTGAACTGCTGCTGGGGTwDXR-q-FTCCAAGGATTGCCAGAGGGTwDXR-q-RATGAATGATAGACTGCCGATGS*E2-AbAi-HindIII- FAGCTTACATGTAAATTCACATGTAAATTCACATGTAAAT3×E2-AbAi-HindIII- FAGCTTACATGTGAATTTACATGTGAATA3×E4-AbAi-HindIII- FAGCTTCACATGTAGACATCACGTTAGACATCACGTTAGACTCGAGTTACATGTGAACTTCACGTGAATTTACATGTGAATA3×E4-AbAi-HindIII- FAGCTTCATCACGTTAGACATCACGTTAGACATCACGTTAGACTCGAGTTCAACGTGATGTCTAACGTGATGTCTAACGTGATGAConstruction of prey vectorsMYC2a-AD-RMYC2a-AD-FGCCATGGAGGCCAGTGAATTCATGACGGACTACCGGCTCC MYC2a-AD-FMYC2b-AD-FGCCATGGAGGCCAGTGAATTCATGACGGACTACCGGCTACMYC2b-AD-FGCCATGGAGGCCAGTGAATTCATGACGGACTACCGGCTAC
MYC2a-q-RTAACAGAAGGATGGCCAATACAAAAMYC2b-q-FAGCTGAACTAAGGGAAAATCGCMYC2b-q-RGGAACAGTGAAGCAGGAATACCTwTPS27a/b-q-FATGAATCAACGGCCCTTGACTTwTPS27a/b-q-FGCTAGAAAAAGACGATTCCGAGCTwTPS7/9-q-FGCTAGAAAAAGACGATTCCGAGCTwHS7/9-q-RATAGCTTGCAAGAATGGCGAATCTwHMGR1-q-FCATGTTTGAACCTGCTGGGGTwDXR-q-FTCAAGGATTGCCAGAGGGTwDXR-q-RATGAATGATAGACTGCGGATGConstruction of bait vectors $3\times$ 22-AbAi-HindIII-FAGCTTATCACATGTAAATTCACATGTGAATA3×E2-AbAi-XhoI-RTCGAGTTACATGTGAATTTACATGTGAATA3×E4-AbAi-XhoI-RTCGAGTCACGTTAGACATCACGTTAGACATCACGTTAGACFAGCTTCATCACGTTAGACATCACGTTAGACATCACGTTAGACMYC2a-AD-F <u>GCCATGGAGGCCCAGTGAATTCACGTGATGACCCGGGCCCC</u> MYC2a-AD-F <u>ACCATGGAGGCCCAGTGAATTCACGGGACTACCGGCTCC</u> MYC2a-AD-F <u>GCCATGGAGGCCAGTGAGTTACCGGGACTACCGGCTCC</u> MYC2a-AD-F <u>ACGATTCATCTGCAGCTGAGATTCATGACGGACTACCGGCTCC</u> MYC2a-AD-F <u>GCCATGGAGGCCAGTGAATTCATGACGGACTACCGGCTCC</u> MYC2a-AD-F <u>GCCATGGAGGCCAGTGAATTCATGACGGACTACCGGCTACCGGCTACCGGCTACCGGCTACCGGCTACCGGCTACCGGCTACCGGCTACCGGCCACCAACCCTGGMYC2b-AD-F<u>GCCATGGAGGCCAGTGAATTCATGACGGACTACCGGCTACCGGCTACCGGCTACCGGCTACCGGCTACCGGCTACCGGCTACCGGCTACCGGCTACCGGCTACCGGCTACCGGCTACCGGCCACCAACCCTGG</u></u>
MYC2b-q-FAGCTGAACTAAGGGAAAATCGCMYC2b-q-RGGAACAGTGAAGCAGGAGTAACCTwTPS27a/b-q-FATGAATCAACGGCCCTTGACTTwTPS27a/b-q-RTCCTAATCGCTGCATCGACTCTwTPS7/9-q-FGCTAGAAAAAGACGATTCCGAGCTwHS7/9-q-RATAGCTTGCAAGAATGGCGAATCTwHMGR1-q-FCATGTTTGAACCTGCTGGGGTwDXR-q-FTCAAGGATTGCCAGAGGGTwDXR-q-RATGAATGAATGACAGCGGATGConstruction of bait vectors $3\times$ 22-AbAi-HindIII-FAGCTTATTCACATGTAAATTCACATGTAAATTCACATGTAACCFAGCTTCATCACGTTAGACATCACGTTAGACATCACGTTAGAC $3\times$ E2-AbAi-XhoI-RTCGAGTCACGTTAGACATCACGTTAGACATCACGTTAGACFAGCTTCATCACGTTAGACATCACGTTAGACATCACGTTAGAC $3\times$ E4-AbAi-XhoI-RTCGAGTCAACGTGATGTCAACGTGATGAC $3\times$ E4-AbAi-XhoI-RCCCATGGAGGCCCAGTGAATTCACGTGATGACMYC2a-AD-FGCCATGGAGGCCAGTGAATTCATGACGGACTACCGGCTCCMYC2a-AD-RACGATTCATCTGCAGCTGAGATTCATGACGACATCACGTGACMYC2a-AD-FGCCATGGAGGCCAGTGAATTCATGACGGACTACCGGCTCCMYC2a-AD-FGCCATGGAGGCCAGTGAATTCATGACGGACTACCGGCTACMYC2b-AD-FGCCATGGAGGCCAGTGAATTCATGACGGACTACCGGCTAC
MYC2b-q-RGGAACAGTGAAGCAGGATTACCTwTPS27a/b-q-FATGAATCAACGGCCCTTGACTTwTPS27a/b-q-FGCTAGAAAAAGACGATTCCGAGCTwTPS7/9-q-FGCTAGAAAAAGACGATTCCGAGCTwTPS7/9-q-RATAGCTTGCAAGAATGGCGAATCTwHMGR1-q-FCATGTTTGAACCTGCTTGGGGTwDXR-q-FTCAAGGATTGCCAGAGGGTwDXR-q-RATGAATGATAGACTGCGGATGConstruction of bait vectors3xE2-AbAi-HindIII-ASE2-AbAi-HindIII-AGCTTATTCACATGTAAATTCACATGTAAATTCACATGTAACFAGCTTCATCACGTTAGGACATCATGTAAATTCACATGTAGACATG3×E2-AbAi-HindIII-AGCTTCATCACGTTAGACATCACGTTAGACATCATGTAGACATCACGTTAGACFAGCTTCATCACGTTAGACATCACGTTAGACATCACGTTAGACS×E4-AbAi-HindIII-AGCTTCATCACGTTAGACATCACGTTAGACATCACGTTAGACMYC2a-AD-FCCCATGGAGGCCAGTGAATTTCATGACGGACTACCGGCTCCMYC2a-AD-FGCCATGGAGGCCAGTGAATTCATGACGGACTACCGGCTCCMYC2a-AD-FGCCATGGAGGCCAGTGAATTCATGACGACCAACCCTGGMYC2b-AD-FGCCATGGAGGCCAGTGAATTCATGACGACCAACCCTGGMYC2b-AD-FGCCATGGAGGCCAGTGAATTCATGACGGACTACCGGCTAC
TwTPS27a/b-q-FATGAATCAACGGCCTTGACTTwTPS27a/b-q-RTCCTAATCGCTGCATCGACTCTwTPS7/9-q-FGCTAGAAAAAGACGATTCCGAGCTwTPS7/9-q-RATAGCTTGCAAGAATGGCGAATCTwHMGR1-q-FCATGTTTGAACCTGCTTGGGGTwDXR-q-FTCAAGGATTGCCAGGAGGTwDXR-q-RATGAATGATAGACTGCGGATGConstruction of bait vectors3×E2-AbAi-HindIII-ASE2-AbAi-HindIII-AGCTTATTCACATGTAAATTCACATGTAAATTCACATGTAACFTCGAGTTACATGTGAATTTACATGTGAATTA3×E2-AbAi-HindIII-AGCTTCATCACGTTAGACATCACGTTAGACFTCGAGTTACATGTGAATTTACATGTGAATA3×E4-AbAi-HindIII-AGCTTCATCACGTTAGACATCACGTTAGACFCGAGTCTAACGTGATGTCTAACGTGATGTCTAACGTGATGAConstruction of prey vectorsCCCATGGAGGCCAGTGAATTCATGACGGACTACCGGCTCCMYC2a-AD-FGCCATGGAGGCCAGTGAATTCATGACGGACTACCGGCTCCMYC2a-AD-FGCCATGGAGGCCAGTGAATTCATGACGGACTACCGGCTCCMYC2b-AD-FGCCATGGAGGCCAGTGAATTCATGACGGACTACCGGCTAC
TwTPS27a/b-q-RTCCTAATCGCTGCATCGACTCTwTPS7/9-q-FGCTAGAAAAAGACGATTCCGAGCTwTPS7/9-q-RATAGCTTGCAAGAATGGCGAATCTwHMGR1-q-FCATGTTTGAACCTGCTTGGGGTwDXR-q-FTCAAGGATTGCCAGAGGGTwDXR-q-RATGAATGATAGACTGCGGATGConstruction of bait vectors $3\times$ E2-AbAi-HindIII-FAGCTTATTCACATGTAAATTCACATGTAAATTCACATGTAACFAGCTTATCACATGTGAATTTACATGTGAATA $3\times$ E2-AbAi-XhoI-RTCGAGTTACATGTGAATTTACATGTGAATA $3\times$ E4-AbAi-HindIII-AGCTTCATCACGTTAGACATCACGTTAGACATCACGTTAGACFCGAGTCTAACGTGATGTCTAACGTGATGTCTAACGTGATGAMYC2a-AD-FGCCATGGAGGCCAGTGAATTCATGACGACTACCGGCTCCMYC2a-AD-FGCCATGGAGGCCAGTGAATTCATGACGACATCCGGCTCCMYC2b-AD-FGCCATGGAGGCCAGTGAATTCATGACGGACTACCGGCTACMYC2b-AD-FGCCATGGAGGCCAGTGAATTCATGACGGACTACCGGCTAC
TwTPS7/9-q-FGCTAGAAAAAGACGATTCCGAGCTwTPS7/9-q-RATAGCTTGCAAGAATGGCGAATCTwHMGR1-q-FCATGTTTGAACCTGCTTGGGGTwHMGR1-q-RGGCTTTTCACAAGCTGTCCAGTwDXR-q-FTCAAGGATTGCCAGAGGGTwDXR-q-RATGAATGATAGACTGCGGATGConstruction of bait vectors $3\times$ E2-AbAi-HindIII- FAGCTTATTCACATGTAAATTCACATGTAAATTCACATGTAAACF3×E2-AbAi-HindIII- FAGCTTACATGTGAATTTACATGTGAATTACATGTGAATA3×E4-AbAi-HindIII- FAGCTTCATCACGTTAGACATCACGTTAGACATCACGTTAGAC F AGCTTCATCACGTGAACATCACGTTAGACATCACGTTAGAC3×E4-AbAi-HindIII- FAGCTTCATCACGTGATGTCTAACGTGATGTCTAACGTGATGAConstruction of prey vectorsMYC2a-AD-FMYC2a-AD-FGCCATGGAGGCCAGTGAATTCATGACGGACTACCGGCTCC MYC2a-AD-FMYC2a-AD-FGCCATGGAGGCCAGTGAATTCATGACGACCACCAACCCTGG MYC2b-AD-FMYC2b-AD-FGCCATGGAGGCCAGTGAATTCATGACGGACTACCGGCTCC MYC2b-AD-FMYC2b-AD-FGCCATGGAGGCCAGTGAATTCATGACGGACTACCGGCTAC
TwTPS7/9-q-RATAGCTTGCAAGAATGGCGAATCTwHMGR1-q-FCATGTTTGAACCTGCTTGGGGTwHMGR1-q-RGGCTTTTCACAAGCTGTCCAGTwDXR-q-FTCAAGGATTGCCAGAGGGTwDXR-q-RATGAATGATAGACTGCGGATGConstruction of bait vectors3×E2-AbAi-HindIII- FAGCTTATTCACATGTAAATTCACATGTAAATTCACATGTAACFAGCTTATTCACATGTGAATTTACATGTGAATA3×E2-AbAi-HindIII- FAGCTTCATCACGTTAGACATCACGTGAAATTCACATGTGAATA3×E4-AbAi-HindIII- FAGCTTCATCACGTTAGACATCACGTTAGACATCACGTTAGAC3×E4-AbAi-HindIII- FAGCTTCATCACGTGATGTCTAACGTGATGTCTAACGTGATGAConstruction of prey vectorsTCGAGTCTAACGTGATGTCTAACGTGATGATGACMYC2a-AD-FGCCATGGAGGCCAGTGAATTCATGACGGACTACCGGCTCC MYC2a-AD-FMYC2b-AD-FGCCATGGAGGCCAGTGAATTCATGACGGACTACCGGCTAC
TwHMGR1-q-FCATGTTTGAACCTGCTTGGGGTwHMGR1-q-RGGCTTTTCACAAGCTGTCCAGTwDXR-q-FTCAAGGATTGCCAGAGGGTwDXR-q-RATGAATGATGACTGCGGATGConstruction of bait vectors33×E2-AbAi-HindIII- FAGCTTATTCACATGTAAATTCACATGTAAATTCACATGTAAC3×E2-AbAi-KhoI-RTCGAGTTACATGTGAATTTACATGTGAATTACATGTGAATA3×E4-AbAi-HindIII- FAGCTTCATCACGTTAGACATCACGTTAGACATCACGTTAGAC3×E4-AbAi-HindIII- FAGCTTCATCACGTGATGTCTAACGTGATGAC3×E4-AbAi-XhoI-RTCGAGTCTAACGTGATGTCTAACGTGATGAC3×E4-AbAi-XhoI-RTCGAGTCTAACGTGATGTCTAACGTGATGACConstruction of prey vectorsMYC2a-AD-FMYC2a-AD-FGCCATGGAGGCCAGTGAATTCATGACGACATCCGGCTCCMYC2a-AD-RACGATTCATCTGCAGCTCGAGTTACCGAGCACCAACCCTGGMYC2b-AD-FGCCATGGAGGCCAGTGAATTCATGACGGACTACCGGCTACMYC2b-AD-FGCCATGGAGGCCAGTGAATTCATGACGGACTACCGGCTAC
TwHMGR1-q-RGGCTTTTCACAAGCTGTCCAGTwDXR-q-FTCAAGGATTGCCAGAGGGTwDXR-q-RATGAATGATAGACTGCGGATGConstruction of bait vectors3×E2-AbAi-HindIII- F3×E2-AbAi-HindIII- FAGCTTATTCACATGTAAATTCACATGTAAATTCACATGTAAC3×E2-AbAi-HindIII- FAGCTTCATCACGTTAGACATCATGTGAATTA3×E4-AbAi-HindIII- FAGCTTCATCACGTTAGACATCACGTTAGACATCACGTTAGAC3×E4-AbAi-HindIII- FAGCTTCATCACGTTAGACATCACGTTAGACATCACGTTAGAC3×E4-AbAi-XhoI-RTCGAGTCTAACGTGATGTCTAACGTGATGTCTAACGTGATGAConstruction of prey vectorsTCGAGTCTAACGTGAATTCATGACGGACTACCGGCTCCMYC2a-AD-FGCCATGGAGGCCAGTGAATTCATGACGGACTACCGGCTCCMYC2a-AD-RACGATTCATCTGCAGCTCGAGTTACCGAGCACCAACCCTGGMYC2b-AD-FGCCATGGAGGCCAGTGAATTCATGACGGACTACCGGCTAC
TwDXR-q-FTCAAGGATTGCCAGAGGGTwDXR-q-RATGAATGATAGACTGCGGATGConstruction of bait vectors3×E2-AbAi-HindIII- F3×E2-AbAi-HindIII- FAGCTTATTCACATGTAAATTCACATGTAAATTCACATGTGAATA3×E2-AbAi-HindIII- FAGCTTCATCACGTTAGAATTTACATGTGAATTACATGTGAATA3×E4-AbAi-HindIII- FAGCTTCATCACGTTAGACATCACGTTAGACATCACGTTAGAC3×E4-AbAi-HindIII- FAGCTTCATCACGTTAGACATCACGTTAGACATCACGTTAGAC3×E4-AbAi-XhoI-RTCGAGTCTAACGTGATGTCTAACGTGATGTCTAACGTGATGAConstruction of prey vectorsMYC2a-AD-FMYC2a-AD-FGCCATGGAGGCCAGTGAATTCATGACGGACTACCGGCTCCMYC2a-AD-RACGATTCATCTGCAGCTCGAGTTACCGAGCACCAACCCTGGMYC2b-AD-FGCCATGGAGGCCAGTGAATTCATGACGGACTACCGGCTAC
TwDXR-q-RATGAATGATAGACTGCGGATGConstruction of bait vectors3×E2-AbAi-HindIII- FAGCTTATTCACATGTAAATTCACATGTAAATTCACATGTAAC3×E2-AbAi-XhoI-RTCGAGTTACATGTGAATTTACATGTGAATTACATGTGAATA3×E4-AbAi-HindIII- FAGCTTCATCACGTTAGACATCACGTTAGACATCACGTTAGAC3×E4-AbAi-HindIII- FAGCTTCATCACGTTAGACATCACGTTAGACATCACGTTAGAC3×E4-AbAi-XhoI-RCCGAGTCTAACGTGATGTCTAACGTGATGTCTAACGTGATGAConstruction of prey vectorsMYC2a-AD-FGCCATGGAGGCCAGTGAATTCATGACGGACTACCGGCTCCMYC2a-AD-RACGATTCATCTGCAGCTCGAGTTACCGAGCACCAACCCTGGMYC2b-AD-FGCCATGGAGGCCAGTGAATTCATGACGGACTACCGGCTAC
Construction of bait vectors3×E2-AbAi-HindIII- FAGCTTATTCACATGTAAATTCACATGTAAATTCACATGTAAC3×E2-AbAi-XhoI-RTCGAGTTACATGTGAATTTACATGTGAATTA3×E4-AbAi-HindIII- FAGCTTCATCACGTTAGACATCACGTTAGACATCACGTTAGAC3×E4-AbAi-XhoI-RTCGAGTCTAACGTGATGTCTAACGTGATGTCTAACGTGATGAConstruction of prey vectorsMYC2a-AD-FMYC2a-AD-FGCCATGGAGGCCAGTGAATTCATGACGAGCACCAACCCTGGMYC2b-AD-FGCCATGGAGGCCAGTGAATTCATGACGAGCACCAACCCTGGMYC2b-AD-FGCCATGGAGGCCAGTGAATTCATGACGGACTACCGGCTAC
3×E2-AbAi-HindIII- FAGCTTATTCACATGTAAATTCACATGTAAATTCACATGTAAC3×E2-AbAi-XhoI-RTCGAGTTACATGTGAATTTACATGTGAATA3×E4-AbAi-HindIII- FAGCTTCATCACGTTAGACATCACGTTAGACATCACGTTAGAC3×E4-AbAi-XhoI-RTCGAGTCTAACGTGATGTCTAACGTGATGTCTAACGTGATGAConstruction of prey vectorsMYC2a-AD-FMYC2a-AD-FGCCATGGAGGCCAGTGAATTCATGACGGACTACCGGCTCCMYC2a-AD-RACGATTCATCTGCAGCTCGAGTTACCGAGCACCAACCCTGGMYC2b-AD-FGCCATGGAGGCCAGTGAATTCATGACGGACTACCGGCTAC
FAGCHTATICACATGTAAATTCACATGTAAATTCACATGTAAATTCACATGTAAATTCACATGTAAATTCACATGTAAATTCACATGTAAATTCACATGTAAATTCACATGTAACTGTAAC3×E2-AbAi-XhoI-RTCGAGTTCACGTTAGACATCACGTTAGACATCACGTTAGAC3×E4-AbAi-XhoI-RTCGAGTCTAACGTGATGTCTAACGTGATGTCTAACGTGATGAConstruction of prey vectorsMYC2a-AD-FMYC2a-AD-FGCCATGGAGGCCAGTGAATTCATGACGGACTACCGGCTCCMYC2a-AD-RACGATTCATCTGCAGGTGAATTCATGACGGACTACCGGCTACMYC2b-AD-FGCCATGGAGGCCAGTGAATTCATGACGGACTACCGGCTAC
3×E2-AbAi-XhoI-RTCGAGTTACATGTGAATTTACATGTGAATTTACATGTGAATA3×E4-AbAi-HindIII- FAGCTTCATCACGTTAGACATCACGTTAGACATCACGTTAGAC3×E4-AbAi-XhoI-RTCGAGTCTAACGTGATGTCTAACGTGATGTCTAACGTGATGAConstruction of prey vectorsMYC2a-AD-FMYC2a-AD-RACGATTCATCGAGCTCGAGTTACCGAGCACCAACCCTGGMYC2b-AD-FGCCATGGAGGCCAGTGAATTCATGACGGACTACCGGCTACMYC2b-AD-FGCCATGGAGGCCAGTGAATTCATGACGGACTACCGGCTAC
3×E4-AbAi-HindIII- FAGCTTCATCACGTTAGACATCACGTTAGACATCACGTTAGAC3×E4-AbAi-XhoI-RTCGAGTCTAACGTGATGTCTAACGTGATGTCTAACGTGATGAConstruction of prey vectorsMYC2a-AD-FGCCATGGAGGCCAGTGAATTCATGACGGACTACCGGCTCCMYC2a-AD-RACGATTCATCTGCAGCTCGAGTTACCGAGCACCAACCCTGGMYC2b-AD-FGCCATGGAGGCCAGTGAATTCATGACGGACTACCGGCTAC
F AGCTICATCACGITAGACATCACGITAGACATCACGITAGAC 3×E4-AbAi-XhoI-R TCGAGTCTAACGTGATGTCTAACGTGATGTCTAACGTGATGA Construction of prey vectors MYC2a-AD-F MYC2a-AD-R ACGATTCATCGCAGCTCGAGTTACCGAGCACCAACCCTGG MYC2b-AD-F GCCATGGAGGCCAGTGAATTCATGACGGACTACCGGCTAC
3×E4-AbAi-XhoI-RTCGAGTCTAACGTGATGTCTAACGTGATGTCTAACGTGATGAConstruction of prey vectorsMYC2a-AD-FGCCATGGAGGCCAGTGAATTCATGACGGACTACCGGCTCCMYC2a-AD-RACGATTCATCTGCAGCTCGAGTTACCGAGCACCAACCCTGGMYC2b-AD-FGCCATGGAGGCCAGTGAATTCATGACGGACTACCGGCTAC
Construction of prey vectorsMYC2a-AD-FGCCATGGAGGCCAGTGAATTCATGACGGACTACCGGCTCCMYC2a-AD-RACGATTCATCTGCAGCTCGAGTTACCGAGCACCAACCCTGGMYC2b-AD-FGCCATGGAGGCCAGTGAATTCATGACGGACTACCGGCTAC
MYC2a-AD-FGCCATGGAGGCCAGTGAATTCATGACGGACTACCGGCTCCMYC2a-AD-RACGATTCATCTGCAGCTCGAGTTACCGAGCACCAACCCTGGMYC2b-AD-FGCCATGGAGGCCAGTGAATTCATGACGGACTACCGGCTAC
MYC2a-AD-RACGATTCATCTGCAGCTCGAGTTACCGAGCACCAACCCTGGMYC2b-AD-FGCCATGGAGGCCAGTGAATTCATGACGGACTACCGGCTAC
MYC2b-AD-F <u>GCCATGGAGGCCAGTGAATTCATG</u> ACGGACTACCGGCTAC
MYC2b-AD-R <u>ACGATTCATCTGCAGCTCGAGCTA</u> TCGAGAATCACCAATCCTGG
Construction of effector vectors (overexpression vectors)
GGGGACAAGTTTGTACAAAAAGCAGGCTTCACCATGACGGACTACCGGCT
MYC2a-OE-F CCCAGTAT
GGGGACCACTTTGTACAAGAAAGCTGGGTCTTACCGAGCACCAACCCTGGA
MY(2a-OH-R
TTGT

Table S3. Primers used in this study

	CGGACTA		
	<u>GGGGACCACTTTGTACAAGAAAGCTGGGTC</u> GTC <mark>CTA</mark> TCGAGAATCACCAAT		
MYC2b-OE-R	CCTGG		
Construction of report	rter vectors (promoter::GUS vectors)		
27aP-F	GACCATGATTACGCCAAGCTTGTACTGAATAAATAAATTAAATTGCTACAG		
	TTATCG		
27aP-R	ACCACCCGGGGATCCTCTAGAAATTCCCAGAAGAAAGGTGTGATTTT		
27bP-F	<u>GACCATGATTACGCCAAGCTT</u> TGGGCCCTCTTTATTGAAAACAAAAAT		
27bP-R	ACCACCCGGGGATCCTCTAGAAATTCCCAGAAGAAAGGTGTGATTTT		
Construction of RNAi vectors			
MYC2-RNAi-1-F	GGGGACAAGTTTGTACAAAAAGCAGGCTTCTATGCCCTACGTGCTGTT		
MYC2-RNAi-1-R	GGGGACCACTTTGTACAAGAAAGCTGGGTTGGATGGTTCCTTTTGCTAC		
MYC2-RNAi-2-F	<u>GGGGACAAGTTTGTACAAAAAGCAGGCT</u> CTGGGTCATGTTTTCGGGTT		
MYC2-RNAi-2-R	GGGGACCACTTTGTACAAGAAAGCTGGGTTGGTGTGGCTGCTGCTATTG		
MYC2-RNAi-3-F	GGGGACAAGTTTGTACAAAAAGCAGGCTTCTCAGCCTTCTGTCACTTTCAA		
MYC2-RNAi-3-R	GGGGACCACTTTGTACAAGAAAGCTGGGTCACTCAGTATCAGTCACCTCTTC		
Note: The underlined converges represent her alogous recombination converge. The start/stop coders are			

Note: The underlined sequences represent homologous recombination sequence. The start/stop codons are marked with red color. The E-box sequences are marked with green color. The restriction site sequences are marked with purple color.

Query= (623 letters)

Database: D:\BioEdit_7.0.9\database\Unigene.fa 67,931 sequences: 47,438,532 total letters

	Score H	3
Sequences producing significant alignments:	(bits) Val	lue
comp41180_c0_seq5	656	0.0
comp40130_c0_seq4	243	2e-064
comp39963_cO_seq1	140	2e-033
comp20233_c0_seq1	104	2e-022
comp32866_cO_seq1	102	9e-022
comp236553_cO_seq1	94	3e-019
comp34060_c0_seq2	93	6e-019
comp31125_cO_seq1	86	5e-017
comp77870_c0_seq1	78	2e-014
comp38681_c1_seq5	77	4e-014
comp30553_c0_seq1	74	3e-013
comp23259_c0_seq1	70	4e-012
comp159021_c0_seq1	70	4e-012
comp32172_c0_seq2	68	2e-011
comp380288_c0_seq1	67	3e-011
comp10848_c0_seq1	67	4e-011
comp148314_c0_seq1	62	8e-010
comp222427_c0_seq1	62	8e-010
comp33182_c0_seq1	62	1e-009
comp32780_c0_seq2	55	1e-007

Figure S1. Results of tBLASTn search in *T. wilfordii* transcriptome library (SRX472292). The project No. of *T. wilfordii* transcriptome library used in this study is SRX472292. The query sequense is the protein sequence of AtMYC2 (also called BAA25078, 623aa).



Figure S2. Identification of the PCR products for the second round of the 5'/3'-rapid amplification of cDNA ends (5'/3'-RACE) (A) and the full-length coding sequence (CDS) (B) of candidate genes (*TwMYC2a/b*). M: DL2000 Marker. The primers for cloning the full-length CDS of *TwMYC2a* were MYC2a-F and MYC2a-R (Table S2), and the MYC2b-F and MYC2b-R (Table S2) for *TwMYC2b*.



Figure S3. Sequence alignment between the 5'/3'-RACE sequences and the candidate gene sequence. The primers used for 2nd round 5'/3'-RACE PCR are marked with a sigle red line. The start codon (ATG) and stop codon (TAG/TAA) are marked with a red box. The gaps in sequence alignment are marked with a yellow box.



Figure S4. Sequence alignment between the 5'/3'-RACE sequences and the partial CDSs of *TwMYC2a* and *TwMYC2b*. The primers used for 2nd round 5'/3'-RACE PCR are marked with a sigle red line. The start codon (ATG) and stop codon (TAA/TAG) are marked with a red box.



Figure S5. Alignment the full-length CDSs and protein sequences between *TwMYC2a* and *TwMYC2b*. Yellow boxes indicate the gaps of nucleotide sequences between *TwMYC2a* and *TwMYC2b*.



Figure S6. Positions of the three RNAi fragments exist in the cDNA of *TwMYC2a*. RNAi-1 (314 bp) fragment is marked with the red boxes. RNAi-2 (304 bp) fragment is marked with the green boxes. RNAi-3 (311 bp) fragment is marked with the yellow boxes.



Figure S7. Identification of RNAi transgenic hairy roots lines. (A) DsRed-positive hairy roots under fluorescence microscopy with white light, (a) and (c), and exciting light, (b) and (d). The hairy root lines were acquired from the transformation of leaf explants of the *T. wilfordii* sterile plantlets (B) and (C): PCR analysis further confirmed the positive transgenic hairy root lines that has been identified by fluorescence identification. M: DL 2000 DNA marker. EV: control hairy root; R1, R2, and R3: RNAi transgenic hairy roots containting the conresponding RNAi vector, pKR-RNAi-1, pKR-RNAi-2, and pKR-RNAi-3, respectively, and have been identified by fluorescence identification. The sequencing primers pKR-F: 5'-CACTATCCTTCGCAAGACCCT-3' and pKR-R: 5'-CTCTGGAGTGAATACCACGACGAT-3' were used to validate the transformed hairy roots in (B). The rolB gene in RNAi transgenic hairy roots was verified by PCR with primers rolB-F : 5'-GCTCTTGCAGTGCTAGATTT-3' and rolB-R: 5'-GAAGGTGCAAGCTACCTCTC-3' (C).



Figure S8. Chromatograms of the standard Triptolide and samples (three biological replicates of EV and R1 hairy roots line). (A) The detection of triptolide in hairy roots of EV and R1 lines by HPLC. (B) The detection of triptolide in the medium of EV and R1 hairy roots lines by HPLC.

TwMYC2a-3'-UTR	GACATTGAACATATT <mark>G</mark> AAGT <mark>T</mark> TAATAATATGCAATCGGGGATGGACATTAATGGGGCAGGATTAGGGACATTTTA	75
TWMIC2B-3'-UIR	GACATIGAACATATICAAGTCTAATAATITGCAATOTGGATTGGGGACATTTTA	54
TwMYC2a-3'-UTR	AGACTCCCGGTCTGTATAATACTGTTCTTGGATAC <mark>T</mark> AT <mark>TT</mark> TAGTCATTT <mark>T</mark> TGAGCTTGAGTTCATTTAGAT	146
TwMYC2b-3'-UTR	AGACTCCCGGTCTGTATAATA <mark>T</mark> TGTTCTTGCTGTTC <mark>TT</mark> GG <mark>T</mark> TAGTAGTCATTTCTGAGCTTGAGTTCATT .AGAT	128
TwMYC2a-3'-UTR	TGAGGA(<mark>CTGAACTAAGGGAAAATAG<mark>G</mark>ATCGGTTCGG</mark> IAGTTCAGGATTTCAAGTCCAAAACATTATTAGGCTCT	221
TwMYC2b-3'-UTR	TGAG <mark>GAGCTGAACTAAGGGAAAATC</mark> GC <mark>ATCGGT</mark>	161
TwMYC2a-3'-UTR	CATCTGCCGAAAAGAT <mark>TTTTCTATTGGCCATCCTTCTGTTA</mark> IGTA <mark>T</mark> ATAATAAT <mark>I</mark> GTCACTG	283
TwMYC2b-3'-UTR	<mark>P</mark> GTTGAAGATTTTTGCATTGG <mark>T</mark> CATCCTTCTGTTATGTAAATAATAATCGTCACTAAATTAAGGTGATC	230
TwMYC2a-3'-UTR		283
TwMYC2b-3'-UTR	AAAGTTTCATGTCTATGAGCA <mark>GGTAATCCTGCTTCACTGTTCC</mark> ITGGGATTAACTTCTGTTGTATCATTGCCTTA	305
TwMYC2a-3'-UTR		283
TwMYC2b-3'-UTR	TTGTTCTTCAGACCTCCTATGGTTACTTTTTCCTGGGGAAGAAGATTCATGAGACAGATATGAATTGAAATCAGA	380
TwMYC2a-3'-UTR		283
TwMYC2b-3'-UTR	AACTTCTGTTGGGTGCTG	398

Figure S9. Primers were designed in the 3'-untranslated region (3'-UTR) of *TwMYC2a/b* for qRT-PCR assays of *TwMYC2a/b*.