

Table S1. Primers used in this study.

Primer Name	Sequence
<b>For PCR</b>	
<i>DoMYB5</i> -F	5'-ATGGGAAGGAATTCGTGCAG-3'
<i>DoMYB5</i> -R	5'-CTAGAATCCACCTCCAATATCAAATAAAG-3'
<i>DobHLH24</i> -F	5'-ATGAAACCAGTCAGCATGGAAGAG-3'
<i>DobHLH24</i> -R	5'-TTAATGGGATAAGAGTTCATGAATTGTCC-3'
<i>proDoCHS</i> -1F	5'-ACTTCCACGGGACCACTACTTGAGGC-3'
<i>proDoCHS</i> -1R	5'-GCTGGTTGATGGATGGAAGCTTGAGAAG-3'
<i>proDoCHS</i> -2F	5'-ACTTCCACCGGACCACTACC-3'
<i>proDoCHS</i> -2R	5'-GCTGGTTGATGGATGGAAGCTT-3'
<i>proDoDFR</i> -1F	5'-TTCAACTCACTCTCTAGTCTTATC-3'
<i>proDoDFR</i> -1R	5'-GAATATTTTCAGTCTCAGTTTATTAAAGA-3'
<b>For qPCR in <i>Dendrobium officinale</i></b>	
q <i>DoMYB5</i> -F	5'-TAATCCGAACAACGGCAATAAG-3'
q <i>DoMYB5</i> -R	5'-AGCATCCAGGTCTCAAAATCC-3'
q <i>DobHLH24</i> -F	5'-CGTCGCAAAGCGAGAGATTG-3'
q <i>DobHLH24</i> -R	5'-TTGTTCTGCGCTTCTTTGCC-3'
q <i>DoActin</i> -F	5'-TCCCAAGGCAAACAGAGAAA-3'
q <i>DoActin</i> -R	5'-GGCCACTAGCATATAGGGAAAG-3'
<b>Transient <i>Dendrobium officinale</i> transformation</b>	
<i>DoMYB5</i> -pTRV2e-F	5'- <u>CGACGACAAGACCCTGCAG</u> ATGGGAAGGAATTCGTGCAG-3'
<i>DoMYB5</i> -pTRV2e-R	5'- <u>GAGGAGAAGAGCCCTGCAG</u> CTAGAATCCACCTCCAATATCA-3'
<i>DobHLH24</i> -pTRV2e-F	5'- <u>CGACGACAAGACCCTGCAG</u> ATGAAACCAGTCAGCATGGAAGA-3'
<i>DobHLH24</i> -pTRV2e-R	5'- <u>GAGGAGAAGAGCCCTGCAG</u> TTAATGGGATAAGAGTTCATGAATT-3'
<b>Transient tobacco transformation</b>	
<i>DoMYB5</i> -pSAK277-F	5'- <u>ACTAGTGGATCCAAAGAATTC</u> ATGGGAAGGAATTCGTGCAGTTT-3'
<i>DoMYB5</i> -pSAK277-R	5'- <u>GAAGTACTCTCGAGAAGCTT</u> CTAGAATCCACCTCCAATATCAAAT-3'
<i>DobHLH24</i> -pSAK277-F	5'- <u>ACTAGTGGATCCAAAGAATTC</u> ATGAAACCAGTCAGCATGGA-3'
<i>DobHLH24</i> -pSAK277-R	5'- <u>GAAGTACTCTCGAGAAGCTT</u> TTAATGGGATAAGAGTTCAT-3'
<b>For qPCR in transgenic tobacco</b>	
q <i>NtCHS</i> -F	5'-GTACAACCTAGTGGTGTAGACA-3'
q <i>NtCHS</i> -R	5'-CCAACTTCACGAAGGTGAC-3'
q <i>NtCHI</i> -F	5'-GAAATCCTCCGATCCAGTGA-3'
q <i>NtCHI</i> -R	5'-CAACGTTGACAACATCAGGC-3'
q <i>NtF3H</i> -F	5'-ACAGGGTGAAGTGGTCCAAG-3'

q <i>NtF3H</i> -R	5'-CCTTGGTTAAGGCCTCCTTC-3'
q <i>NtF3'</i> H-F	5'-TCCAAGAATACTGGCCCAAG-3'
q <i>NtF3'</i> H-R	5'-CTCACAACCTCTCGGATGCAA-3'
q <i>NtDFR</i> -F	5'-AACCAACAGTCAGGGGAATG-3'
q <i>NtDFR</i> -R	5'-TTGGGCATCGAGAGTTCCAG-3'
q <i>NtANS</i> -F	5'-TGCGTGTGAAGCTCATACTG-3'
q <i>NtANS</i> -R	5'-GGAATTAGGCACACACTTTGC-3'
q <i>NtUFGT</i> -F	5'-CAATGTTTGGGATGGTGTCA-3'
q <i>NtUFGT</i> -R	5'-TTCCTCCTCTGCCTCTTTCA-3'
q <i>NtAn1a</i> -F	5'-ACCATTCTCGAACACCGAAG-3'
q <i>NtAn1a</i> -R	5'-TGCTAGGGCACAATGTGAAG-3'
q <i>NtAn1b</i> -F	5'-CTTGAACACTTCTCAAACCGA-3'
q <i>NtAn1b</i> -R	5'-TGCTAGGGCACAATGTGAAG-3'
q <i>NtActin</i> -F	5'-AATGATCGGAATGGAAGCTG-3'
q <i>NtActin</i> -R	5'-TGGTACCACCACTGAGGACA-3'

**For yeast one-hybrid analysis**

<i>DoMYB5</i> -pGADT7-Rec2-F	5'- <u>ACCAGATTACGCTCATATG</u> ATGGGAAGGAATTCGTGCAGTT-3'
<i>DoMYB5</i> -pGADT7-Rec2-R	5'- <u>CGATTCATCTGCAGCTCGAG</u> CTAGAATCCACCTCCAATATCA-3'
<i>DobHLH24</i> - pGADT7-Rec2-F	5'- <u>ACCAGATTACGCTCATATG</u> ATGAAACCAGTCAGCATGGAAGA-3'
<i>DobHLH24</i> - pGADT7-Rec2-R	5'- <u>CGATTCATCTGCAGCTCGAG</u> TTAATGGGATAAGAGTTCATGAATT -3'
<i>proDoCHS</i> -pHIS2-F	5'- <u>CTATAGGGCGAATTC</u> ACTTCCACCGGACCACTACCT-3'
<i>proDoCHS</i> -pHIS2-R	5'- <u>GCGAACGCGTGAGCTC</u> GCTGGTTGATGGATGGAAGCTT-3'
<i>proDoDFR</i> -pHIS2-F	5'- <u>CTATAGGGCGAATTC</u> TTCAACTCACTCTCTAGTCTTATCA -3'
<i>proDoDFR</i> -pHIS2-R	5'- <u>GCGAACGCGTGAGCTC</u> GAATATTTTCAGTCTCAGTTTATTAA -3'

**For yeast two-hybrid analysis**

<i>DoMYB5</i> -AD-F	5'- <u>ACCAGATTACGCTCATATG</u> ATGGGAAGGAATTCGTGCAGTT-3'
<i>DoMYB5</i> -AD-R	5'- <u>CGATTCATCTGCAGCTCGAG</u> CTAGAATCCACCTCCAATATCA-3'
<i>DobHLH24</i> -BD-F	5'- <u>TCAGAGGAGGACCTGCATATG</u> ATGAAACCAGTCAGCAT-3'
<i>DobHLH24</i> -BD-R	5'- <u>TTCGGCCTCCATGGCCATATG</u> TTAATGGGATAAGAGTTC-3'

**Dual luciferase assay**

<i>DoMYB5</i> -pSAK277-F	5'- <u>ACTAGTGGATCCAAAGAATTC</u> ATGGGAAGGAATTCGTGCAGTTT-3'
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<i>DoMYB5</i> -pSAK277-R	5'- <u>GAAGTACTCTCGAGAAGCTT</u> CTAGAATCCACCTCCAATATCAAAT-3'
<i>DobHLH24</i> -pSAK277-F	5'- <u>ACTAGTGGATCCAAAGAATTC</u> ATGAAACCAGTCAGCATGGA-3'
<i>DobHLH24</i> -pSAK277-R	5'- <u>GAAGTACTCTCGAGAAGCTT</u> TTAATGGGATAAGAGTTCAT-3'
<i>proDoCHS</i> - pGreenII0800-F	5'- <u>ACTATAGGGCGAATTGGGTACC</u> ACTTCCACCGGACCACTACCT -3'
<i>proDoCHS</i> - pGreenII0800-R	5'- <u>TGCAGGAATTCGATATCAAGCTT</u> GCTGGTTGATGGATGGAAGCTT -3'
<i>proDoDFR</i> - pGreenII0800-F	5'- <u>TCGACGGTATCGATAAGCTT</u> TTCAACTCACTCTCTAGTCTTATCA-3'
<i>proDoDFR</i> - pGreenII0800-R	5'- <u>GCTCTAGAACTAGTGGATCC</u> GAATATTTTCAGTCTCAGTTTATTAA-3'

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