

Supplementary Table S1: Primer sequences used in qRT-PCR.

Gene locus ID	primer sequence/F	primer sequence/R
FvH4_3g34410.1	GGTACCGGTTTTCTCCCTCA	CAGATCCATCGTTGCTGTCG
FvH4_3g35730.1	GGCGGTCTCTCAGTATCCAT	GTCTCCTCTTGACCCCAACA
FvH4_2g34030.1	ATGAAGGTGCATCAGTTCGC	AGCTTGTTTCTAGGGCCACT
FvH4_5g17270.1	AGATTCGTCTCTCGTTCCC	TCTAGTGCCCTCAACTGCTC
FvH4_4g32650.1	CTGCAGTTCCTTGCGAAAT	GTTACAGGCGTCTGATCTTC
FvH4_7g24100.1	TCAGGTCTGGACTTCGAACG	AGGCTCCGAACCTCACTTGAT
FvH4_4g32660.1	ACTTCCAACACGACGCAAAA	CGTCGGTGTCTTTAAGCCAG
FvH4_1g11910.1	TTAGGTCCCCAAGTGCAGAG	TCCCAACAAGCCCTGATCTT
FvH4_3g04400.1	ATCCGTTTCCAGCTGAGACA	GGTGCAGAAGAAACCCCTTG
FvH4_5g02150.1	CGCAAGGGAGAAGTAGCAGT	CCTGGCTCGGTAGTTCTGAA
FvH4_3g08310.1	AAACGGTTCATGCCACAGAC	CACCGACTTGACCGTACTCT
FvH4_1g10280.1	CAATGGAGGTGTGGGGTTTG	CAGAATCTGTAGCTGCACCG
FvH4_3g10130.1	ACAACATCATCAGGGCTGGA	CGATGCTTGTGTTTGGACCT
FvH4_5g03570.1	CAACTCCGGAAACAGATCGC	CCTCGCAGTTACCTTGTTGC
FvH4_1g29830.1	CGCCGAAAGAAGAGACTGTG	CGGCTGCTAATTGGTTCCTC

FvH4_5g25470.1	GCAGAGAAGAGTGTGGCAG	CGCCGTACACATTTCCCATC
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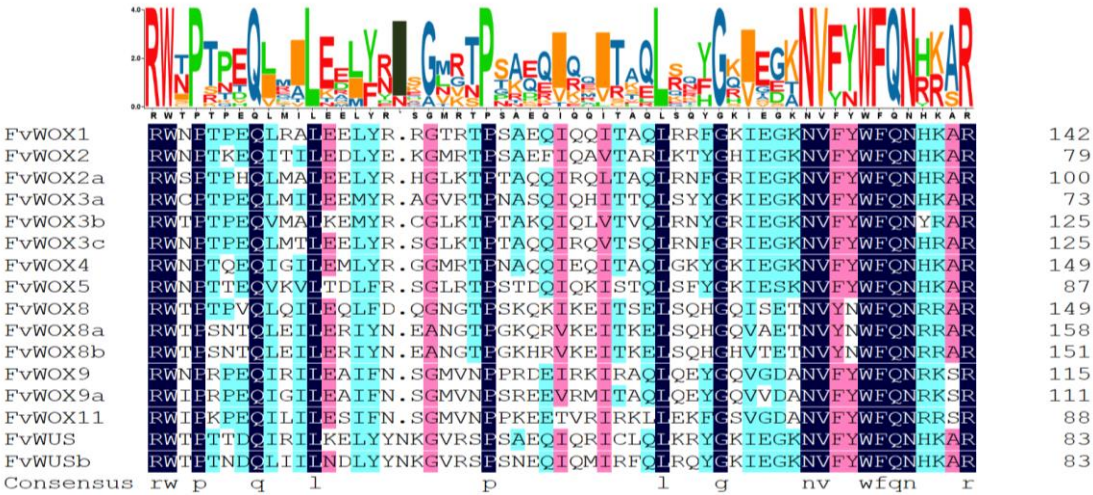
Supplementary Table S2: List of *FvWOX* genes

Gene locus ID	Rename
FvH4_2g34030.1	FvWOX4
FvH4_5g17270.1	FvWOX1
FvH4_3g34410.1	FvWOX3a
FvH4_3g35730.1	FvWOX2
FvH4_1g11910.1	FvWUS
FvH4_3g04400.1	FvWUSb
FvH4_7g24100.1	FvWOX5
FvH4_5g02150.1	FvWOX3b
FvH4_4g32650.1	FvWOX2a
FvH4_4g32660.1	FvWOX3c
FvH4_3g08310.1	FvWOX9
FvH4_3g10130.1	FvWOX9a
FvH4_1g29830.1	FvWOX11

FvH4_1g10280.1	FvWOX8
FvH4_5g03570.1	FvWOX8a
FvH4_5g25470.1	FvWOX8b

Supplementary Table S3: The amino acid sequences of 8 conserved motifs

Motif 1	ILEEJYN SGMRTPSAZQIQQIT AQLRQYGKIEGKNVFYWFQNHKARERQK
Motif 2	RSRWTPTPEQJ
Motif 3	CVMTDDQVEQLRKQIAVYAVICEQLVDMHKAFTAQQDLA GKMKGNVYGD
Motif 4	EEESRETZTLELFPLKSEN L
Motif 5	DVAFEVAEGPFNVREAFGDDAVLIHSSGHPVLTNEWGVT LHS LHHGAFYY
Motif 6	RRRQLMSMYQSDSKQQQTLNNTV SGLQDKESAGGLTN
Motif 7	ATLIYPKLLDFHHYYDYDYGMV
Motif 8	KKFTADGHVPMQRSGLVGN G NCTNWKPEDQYMN MNNKYSNI



Supplementary Figure S1. Sequence alignments of the HB domains of FvWOXs. Sequence logos about the homeobox (HB) domain were shown on the top.

Supplementary Figure S3. The interaction network prediction of FvWOX3a with other proteins. The relationship between proteins is shown in the legend in the figure.