

SUPPLEMENTARY DATA

Table 1. Primers used for gene isolation, expression in *Epimedium*, qPCR of flowering time genes in arabidopsis, yeast two-hybrid and yeast three-hybrid.

Genes/primer name	Sequences (5' to 3')	Usage
3'CDS	AAGCAGTGGTATCAACGCAGAGTAC(T)30N-1N	First strand synthesis for 3'RACE
5'CDS	(T)25VN-3'	First strand synthesis for 5'RACE
SMARTII	AAGCAGTGGTATCAACGCAGAGTACGCGGG	RACE
UPML	F:CTAATACGACTCACTATAGGGCAAGCAGTGGTATCAACGCAGAGT	5'RACE for first round
UPMS	F:CTAATACGACTCACTATAGGGC	5'RACE for second round
NUP	AAGCAGTGGTATCAACGCAGAGT	5'RACE for second round
<i>EsFUL</i> -like	F: CAGTGGGATCAGCAAATCA R: AGGAGGCATCAGGGAGGTAT	qPCR qPCR
<i>EsAGL2-1</i>	F: TGCCAGAACTCTCAACCAGA R: CATCCATCCAGGAATGAAGC	qPCR qPCR
<i>EsAGL2-2</i>	F: CATCGACCATTCTGGGAAAC R: CGCAAGTTTGAATTGCATTG	qPCR qPCR
<i>EsAGL6</i> -Like	F: AGCTTGAGCCTGAAGGACAG R: TGGTCAGGGCAAGGAGAAGT	qPCR qPCR
<i>EsACTIN</i>	F: GCCATTCAAGGCTGTCTTTTC R: GGTAAGATCGCGACCTGCTA	qPCR qPCR
<i>FUL</i> -like	F: CTSAAGAARGCKCAYGAGATC F: GAGATCTCYGTSCTCTGYGAYG	3' RACE one round 3' RACE one round
<i>EsAGL2-1/2-2</i>	F:GAGAACAARATHAACAGGCARG F:AGGTTGCTCTMATMATYTTTC	3' RACE one round 3'RACE second round
<i>EsAGL2-1</i>	R:TTGCGTTAGCTTCTTTTCAGCATTGTTCCTTTTG R:TGTCCGGGGCGTTTGTCTCCAAGGAT	5' RACE one round 5'RACE second round
<i>EsAGL2-2</i>	R:AAGTGCACCTTTGATACCTCTCCAATGTCTTGT R:AGCATACTCGAAGAGCTTTCTTTGGTTGAGAA	5' RACE one round 5'RACE second round
<i>EsAGL6</i>	F:ATGGGDAGAGGRAGAGTDGAGYT R: GGAAGGAGTTGGCTTGACTAATGC R: GCTCTTTGAGGGGTGTAACAGCAA	3' RACE 5' RACE one round 5' RACE second round
<i>EsFUL</i>	F: ATGGGGAGAGGTAGGGTTCAAC R: TTATTCAATCAGGAGGATGACGAAGCAT	Full-length primer Full-length primer
<i>CO</i>	F: TGCAAACCCACTTGCT R: CCTCCTTGGCATCCTTATCA	qRT-PCR qRT-PCR
<i>FT</i>	F: GGAACAACCTTTGGCAAT R:AGCCACTCTCCCTCTGACAA	qRT-PCR qRT-PCR
<i>AP1</i>	F: GCAAGCAATGAGCCCTAAAG R:ACTGCTCCTGTTGAGCCCTA	qRT-PCR qRT-PCR
<i>LFY</i>	F: ATTGGTTCAAGCACCACTC R:CAAGAAGCTCCAACGAAAG	qRT-PCR qRT-PCR

<i>FLC</i>	F: AGCCAAGAAGACCGAACTCA	qRT-PCR
	R:TTTGTCCAGCAGGTGACATC	qRT-PCR
<i>SOC1</i>	F: AATTCGCCAGCTCCAATATG	qRT-PCR
	R:CCTCGATTGAGCATGTTCTCT	qRT-PCR
<i>TUB</i>	F: TGGCATCAACTTTCATTGGA	qRT-PCR
	R:ATGTTGCTCTCCGCTTCTGT	qRT-PCR
FULEcoRI	F:CCGGAATTCATGGGGAGAGGTAGGGTTCA	Y2H
FULBamHI	R:TTATTCATTCACATGACGAAGCA	Y2H
AGL2-1EcoRI	F:CCGGAATTCATGGGAAGAGGAAGAG	Y2H
AGL2-1BamHI	R:CGGGATCCTAGGTGATGAGTTAGAAC	Y2H
AGL6NdeI	F:GGAATTCATATGGGGAGAGGGAGAGTG	Y2H
AGL6BamHI	R:CGCGGATCCTCAAAGGACCCATCCTTGGA	Y2H
AGL2-2NdeI	F: GGAATTCATATGGGGAGGGGGAGAGTGG	Y2H
AGL2-2SEP1	R:CGGGATCCTTATTCCTCTGTTTGAGTCT	Y2H
AGL2-2SEP2	R:CGGGATCCTTATGCTGCAACTTGAT	Y2H
AGyeastF	F: CCGGAATTCATGGGAAGAGGAAGA	Y2H
AGyeastR	R: CGGGATCCTGTCAAGCATATCATCCGA	Y2H
AG11yeastF	F: GGAATTCATATGCCTGCAGGTCG	Y2H
AG11yeastR	R: CCGGAATTCCTATCCAAGGTGGAG	Y2H
AP3-1(IKC)yeastF	F: CCGGAATTCAGAGTCCTTCCCTCACG	Y2H
AP3-1(IKC)yeastR	R: CGCGGATCCAACCTCTATTAGGCAAGA	Y2H
AP3-2(IKC)yeastF	F: CCGGAATTCGTTAGTCCCGGACA	Y2H
AP3-2(IKC)yeastR	R: CGCGGATCCTATATTTAACTTGATAAC	Y2H
AP3-3(IKC)yeastF	F: CCGGAATTCATCAGTCCTTATAACG	Y2H
AP3-3(IKC)yeastR	R: CGCGGATCCACCAAGTTGTAAATTGA	Y2H
PI(IKC)yeastF	F: CCGGAATTCGTAGCCCTTCCACCACG	Y2H
PI(IKC)yeastR	R: CGCGGATCCAGTAAGTTTTGGCAGCTTTC	Y2H
AP3-2(IKC)pTFT	F: CCGGAATTCGTTAGTCCCGGACA	Y3H
AP3-2(IKC)pTFT	R: CGCGGATCCTATATTTAACTTGATAAC	Y3H

Table 2. Sequences for AP1, SEP and AGL6 phylogeny reconstruction

Family	Species	Accession No	Name	Type
Magnoliaceae	<i>Magnolia grandiflora</i>	AY821777 (NCBI)	Magnolia_g_FUL	FUL-like
Brassicaceae	<i>Arabidopsis thaliana</i>	NM_105581 (NCBI)	Arabidopsis_t_AP1	euAP1
		NM_102395 (NCBI)	Arabidopsis_t_CAL	euAP1
		NM_125484 (NCBI)	Arabidopsis_t_FUL	FUL-like
		NM_113925 (NCBI)	Arabidopsis_t_AGL79	AGL79
Caricaceae	<i>Carica papaya</i>	evm.TU.supercontig_1.158	Carica_p_AP1	euAP1
Rosaceae	<i>Fragaria vesca</i>	gene26119	Fragaria_v_AP1	euAP1
		gene04228	Fragaria_v_AGL79	AGL79
		gene04562	Fragaria_v_FUL	euFUL
Vitaceae	<i>Vitis vinifera</i>	GSVIVT01012250001	Vitis_v_AP1	euAP1
		GSVIVT01036549001	Vitis_v_AGL79	AGL79
		GSVIVT01008140001	Vitis_v_FUL	euFUL
Solanaceae	<i>Solanum lycopersicum</i>	AF448521 (NCBI)	Solanum_l_MC	euAP1
		TC162618 (TIGR)	Solanum_l_leFUL	euFUL
		BT013126 (TIGR)	Solanum_l_SLMBP20	AGL79
		NM_001247614 (NCBI)	Solanum_l_TDR4	euFUL
Rosaceae	<i>Prunus persica</i>	PPA010723M	Prunus_p_AP1	euAP1
		PPA010249M	Prunus_p_AGL79	AGL79
		PPA010308M	Prunus_p_FUL	euFUL
Berberidaceae	<i>Dysosma pleiantha</i>	JN593333 (NCBI)	Dysosma_p_FUL	FUL-like
	<i>Nandina domestica</i>	JN593334 (NCBI)	Nandina_d_FUL	FUL-like
	<i>Mahonia bealei</i>	JN593335 (NCBI)	Mahonia_b_FUL	FUL-like
	<i>Epimedium sagittatum</i>	JN590216 (NCBI)	Epimedium_s_FUL	FUL-like
Ranunculaceae	<i>Aquilegia coerulea</i>	JX680252 (NCBI)	Aquilegia_c_FUL1A	FUL-like
		JX680253 (NCBI)	Aquilegia_c_FUL1B	FUL-like
Papaveraceae	<i>Eschscholzia californica</i>	HM592297 (NCBI)	Eschscholzia_c_FUL1	FUL-like
		HM592298 (NCBI)	Eschscholzia_c_FUL2	FUL-like
Lardizabalaceae	<i>Akebia trifoliata</i>	AY627632 (NCBI)	Akebia_t_FUL1	FUL-like
		GU357459 (NCBI)	Akebia_t_FUL2	FUL-like
Lardizabalaceae	<i>Decaisnea insignis</i>	DQ656556 (NCBI)	Decaisnea_i_FUL1	FUL-like
		DQ656557 (NCBI)	Decaisnea_i_FUL2	FUL-like
Amborellaceae	<i>Amborella trichopoda</i>	AY850179 (NCBI)	Amborella_t_AGL2	AGL2/3/4
Nymphaeaceae	<i>Nuphar advena</i>	AY850183 (NCBI)	Nuphar_a_AGL2	AGL2/3/4
Magnoliaceae	<i>Magnolia grandiflora</i>	AY821781 (NCBI)	Magnolia_g_AGL2	AGL2/3/4
		AY551922 (NCBI)	Oryza_s_RMADS217	AGL2/3/4
		U78890 (NCBI)	Oryza_s_OsMADS5	AGL2/3/4
Papaveraceae	<i>Eschscholzia californica</i>	AY850181 (NCBI)	Eschscholzia_c_AGL2	AGL2/3/4
Berberidaceae	<i>Epimedium sagittatum</i>	JN590218 (NCBI)	Epimedium_s_AGL2-1	AGL2/3/4
		JN590219 (NCBI)	Epimedium_s_AGL2-2	AGL2/3/4
	<i>Aquilegia coerulea</i>	JX680244 (NCBI)	Aquilegia_c_SEP1	AGL2/3/4
		JX680245 (NCBI)	Aquilegia_c_SEP2A	AGL2/3/4
	<i>Eschscholzia californica</i>	AY850181	Eschscholzia_c_AGL2	AGL2/3/4
	Lardizabalaceae	<i>Akebia trifoliata</i>	GU357447 (NCBI)	Akebia_t_SEP1_1

		GU357488 (NCBI)	Akebia_t_SEP1_2	AGL2/3/4
Caricaceae	<i>Carica papaya</i>	evm.TU.supercontig_14.225	Carica_p_FBP9	FBP9
		evm.TU.supercontig_660.1	Carica_p_SEP1	AGL3
Solanaceae	<i>Solanum lycopersicum</i>	SOLYC02G089200.2	Solanum_l_TM29	AGL2
		SOLYC03G114840.2	Solanum_MADS1	FBP9
		NM_001247741 (NCBI)	Solanum_l_RIN	FBP9
Rosaceae	<i>Fragaria vesca</i>	gene04563	Fragaria_v_AGL3	AGL3
		gene04229	Fragaria_v_AGL2	AGL2
		gene26118	Fragaria_v_FBP9	FBP9
Vitaceae	<i>Vitis vinifera</i>	GSVIVT01012249001	Vitis_v_AGL3	AGL3
		GSVIVT01036551001	Vitis_v_AGL2	AGL2
		GSVIVT01008139001	Vitis_v_FBP9	FBP9
Rosaceae	<i>Prunus persica</i>	ppa1027139m	Prunus_p_AGL3	AGL3
		ppa010577m	Prunus_p_AGL2	AGL2
		ppa010391m	Prunus_p_FBP9	FBP9
Gnetaceae	<i>Gnetum parvifolium</i>	AB022665 (NCBI)	Gnetum_p_MAD3	AGL6-like
Poaceae	<i>Oryza sativa</i>	AF109153 (NCBI)	Oryza_s_MADS17	AGL6-like
		OSU78782 (NCBI)	Oryza_s_MADS6	AGL6-like
Magoliaceae	<i>Magnolia praecocissima</i>	AB050645 (NCBI)	Magolia_p_AGL3	AGL6-like
		AB050646 (NCBI)	Magolia_p_AGL4	AGL6-like
Ranunculaceae	<i>Ranunculus bulbosus</i>	AY306184 (NCBI)	Ranunculus_b_AGL6	AGL6-like
	<i>Aquilegia coerulea</i>	JX680248 (NCBI)	Aquilegia_c_AGL6	AGL6-like
Berberidaceae	<i>Epimedium sagittatum</i>	JN590217 (NCBI)	Epimedium_s_AGL6	AGL6-like
Vitaceae	<i>Vitis vinifera</i>	AF373602 (NCBI)	Vitis_v_MADS3	euAGL6
		EC990748 (NCBI)	Vitis_v_AGL6a	AGL6-like
Rosaceae	<i>Malus domestica</i>	AJ000763 (NCBI)	Malus_d_MADS11	euAGL6
Fabaceae	<i>Pisum sativum</i>	AY884289 (NCBI)	Pisum_s_AGL6	euAGL6
Rutaceae	<i>Citrus reticulata</i> x <i>Citrus temple</i>	DN795437	Citrus_r_AGL6	AGL6-like
Diapensiaceae	<i>Galax urceolata</i>	M55554	Galax_u_AGL6	euAGL6
Actinidiaceae	<i>Actinidia chinensis</i>	HM121974 (NCBI)	Actinidia_c_AGL6a	AGL6-like
Brassicaceae	<i>Arabidopsis thaliana</i>	M55554 (NCBI)	Arabidopsis_t_AGL6	euAGL6
		NM_115976.1 (NCBI)	Arabidopsis_t_AGL13	euAGL6
Caricaceae	<i>Carica papaya</i>	EU659992 (NCBI)	Carica_p_MADS3	euAGL6
Malvaceae	<i>Gossypium hirsutum</i>	FJ409870 (NCBI)	Cossypium_h_MADS13	euAGL6