

Supplemental Table 2 **Gene names and identifiers of selected sequences used in the phylogenetic analysis**

Organism Name	Gene Name	Identifier
Aquilegia coerulea	18159388Ac	AcoGoldSmith_v1.006771m.g
Aquilegia coerulea	18140802Ac	AcoGoldSmith_v1.006321m.g
Aquilegia coerulea	18150763Ac	AcoGoldSmith_v1.017640m.g
Aquilegia coerulea	18142751Ac	AcoGoldSmith_v1.004658m.g
Aquilegia coerulea	18159907Ac	AcoGoldSmith_v1.006251m.g
Aquilegia coerulea	18160118Ac	AcoGoldSmith_v1.021359m.g
Aquilegia coerulea	18163166Ac	AcoGoldSmith_v1.005255m.g
Aquilegia coerulea	18162118Ac	AcoGoldSmith_v1.006913m.g
Aquilegia coerulea	18163482Ac	AcoGoldSmith_v1.022388m.g
Aquilegia coerulea	18164188Ac	AcoGoldSmith_v1.005717m.g
Arabidopsis lyrata	16062501Al	16062501_locus
Arabidopsis lyrata	16047680Al	16047680_locus
Arabidopsis lyrata	16056074Al	16056074_locus
Arabidopsis lyrata	16044941Al	16044941_locus
Arabidopsis lyrata	16050017Al	16050017_locus
Arabidopsis lyrata	895047Al	16049858_locus
Arabidopsis lyrata	16041875Al	16041875_locus
Arabidopsis lyrata	16059627Al	16059627_locus
Arabidopsis lyrata	897773Al	16044723_locus
Arabidopsis lyrata	905662Al	16038674_locus
Arabidopsis lyrata	902126Al	16041186_locus
Arabidopsis lyrata	16047865Al	16047865_locus
Arabidopsis lyrata	16055448Al	16055448_locus
Arabidopsis lyrata	898223Al	16047957_locus
Arabidopsis lyrata	16057730Al	16057730_locus
Arabidopsis lyrata	16060581Al	16060581_locus
Arabidopsis lyrata	908782Al	16060645_locus
Arabidopsis lyrata	16061974Al	16061974_locus
Arabidopsis lyrata	16061733Al	16061733_locus
Arabidopsis thaliana	AtTCP10	AT2G31070
Arabidopsis thaliana	AtTCP16	AT3G45150
Arabidopsis thaliana	AtTCP11	AT2G37000
Arabidopsis thaliana	AtTCP14	AT3G47620
Arabidopsis thaliana	AtTCP15	AT1G69690
Arabidopsis thaliana	AtTCP22	AT1G72010
Arabidopsis thaliana	AtTCP23	AT1G35560
Arabidopsis thaliana	AtTCP20	AT3G27010
Arabidopsis thaliana	AtTCP21	AT5G08330
Arabidopsis thaliana	AtTCP19	AT5G51910
Arabidopsis thaliana	AtTCP9	AT2G45680
Arabidopsis thaliana	AtTCP8	AT1G58100
Arabidopsis thaliana	AtTCP7	AT5G23280
Arabidopsis thaliana	AtTCP6	AT5G41030
Arabidopsis thaliana	17362435At	AT3G15030
Arabidopsis thaliana	17353720At	AT1G68800
Arabidopsis thaliana	17372999At	AT5G08070
Arabidopsis thaliana	17351927At	AT1G53230
Arabidopsis thaliana	17369179At	AT4G18390
Arabidopsis thaliana	17350301At	AT1G30210

<i>Arabidopsis thaliana</i>	17360709At	AT3G02150
<i>Arabidopsis thaliana</i>	17378847At	AT5G60970
<i>Arabidopsis thaliana</i>	17362913At	AT3G18550
<i>Brachypodium distachyon</i>	16476671Bd	Bradi1g45220
<i>Brachypodium distachyon</i>	16487764Bd	Bradi2g59240
<i>Brachypodium distachyon</i>	16495220Bd	Bradi3g59320
<i>Brachypodium distachyon</i>	16500096Bd	Bradi4g41430
<i>Brachypodium distachyon</i>	16486650Bd	Bradi2g50690
<i>Brachypodium distachyon</i>	16499368Bd	Bradi4g35520
<i>Brachypodium distachyon</i>	16498028Bd	Bradi4g24550
<i>Brachypodium distachyon</i>	16492304Bd	Bradi3g36590
<i>Brachypodium distachyon</i>	16486585Bd	Bradi2g50190
<i>Brachypodium distachyon</i>	16499383Bd	Bradi4g35670
<i>Brachypodium distachyon</i>	16483278Bd	Bradi2g20060
<i>Brachypodium distachyon</i>	16495344Bd	Bradi3g60350
<i>Brachypodium distachyon</i>	16500844Bd	Bradi5g02880
<i>Brachypodium distachyon</i>	16502200Bd	Bradi5g16270
<i>Brachypodium distachyon</i>	16498681Bd	Bradi4g29980
<i>Brachypodium distachyon</i>	16493989Bd	Bradi3g49660
<i>Brachypodium distachyon</i>	16495616Bd	Bradi4g01550
<i>Brachypodium distachyon</i>	16472204Bd	Bradi1g06460
<i>Brachypodium distachyon</i>	16481658Bd	Bradi2g06890
<i>Brachypodium distachyon</i>	16472785Bd	Bradi1g11060
<i>Brachypodium distachyon</i>	16478318Bd	Bradi1g58450
<i>Carica papaya</i>	16425287Cp	evm.TU.supercontig_70.118
<i>Carica papaya</i>	16424588Cp	evm.TU.supercontig_66.26
<i>Carica papaya</i>	16407854Cp	evm.TU.supercontig_13.48
<i>Carica papaya</i>	16410588Cp	evm.TU.supercontig_17.1
<i>Carica papaya</i>	16424427Cp	evm.TU.supercontig_65.20
<i>Carica papaya</i>	16423768Cp	evm.TU.supercontig_60.75
<i>Carica papaya</i>	16411203Cp	evm.TU.supercontig_179.29
<i>Carica papaya</i>	16421375Cp	evm.TU.supercontig_5.261
<i>Carica papaya</i>	16428802Cp	evm.TU.supercontig_94.62
<i>Citrus clementina</i>	Ci018801	clementine0.9_018801m.g
<i>Citrus clementina</i>	Ci016144	clementine0.9_016144m.g
<i>Citrus clementina</i>	Ci032670	clementine0.9_032670m.g
<i>Citrus clementina</i>	Ci028015	clementine0.9_028015m.g
<i>Citrus clementina</i>	Ci015044	clementine0.9_015044m.g
<i>Citrus clementina</i>	Ci015257	clementine0.9_015257m.g
<i>Citrus clementina</i>	Ci021764	clementine0.9_021764m.g
<i>Citrus clementina</i>	Ci008223	clementine0.9_008223m.g
<i>Citrus clementina</i>	Ci015906	clementine0.9_015906m.g
<i>Citrus clementina</i>	Ci018374	clementine0.9_018374m.g
<i>Citrus clementina</i>	Ci012352	clementine0.9_012352m.g
<i>Citrus clementina</i>	Ci010976	clementine0.9_010976m.g
<i>Citrus clementina</i>	Ci013545	clementine0.9_013545m.g
<i>Citrus clementina</i>	Ci032667	clementine0.9_032667m.g
<i>Citrus clementina</i>	Ci011097	clementine0.9_011097m.g
<i>Citrus clementina</i>	Ci013585	clementine0.9_013585m.g
<i>Citrus clementina</i>	Ci012071	clementine0.9_012071m.g
<i>Cucumis sativus</i>	385930Cs	Cucsa.385930
<i>Cucumis sativus</i>	16955801Cs	Cucsa.076020
<i>Cucumis sativus</i>	16968477Cs	Cucsa.197650
<i>Cucumis sativus</i>	16968642Cs	Cucsa.198860

Cucumis sativus	16973828Cs	Cucsa.273460
Cucumis sativus	16953760Cs	Cucsa.047860
Cucumis sativus	16961496Cs	Cucsa.122730
Eucalyptus grandis	Eg021099	Egrandis_v1_0.021099m.g
Eucalyptus grandis	Eg038354	Egrandis_v1_0.038354m.g
Eucalyptus grandis	Eg018326	Egrandis_v1_0.018326m.g
Eucalyptus grandis	Eg017323	Egrandis_v1_0.017323m.g
Eucalyptus grandis	Eg018268	Egrandis_v1_0.018268m.g
Eucalyptus grandis	Eg011715	Egrandis_v1_0.011715m.g
Eucalyptus grandis	Eg050438	Egrandis_v1_0.050438m.g
Eucalyptus grandis	Eg051391	Egrandis_v1_0.051391m.g
Eucalyptus grandis	Eg016729	Egrandis_v1_0.016729m.g
Eucalyptus grandis	Eg049885	Egrandis_v1_0.049885m.g
Eucalyptus grandis	Eg014141	Egrandis_v1_0.014141m.g
Eucalyptus grandis	Eg018583	Egrandis_v1_0.018583m.g
Eucalyptus grandis	Eg040933	Egrandis_v1_0.040933m.g
Eucalyptus grandis	Eg015738	Egrandis_v1_0.015738m.g
Eucalyptus grandis	Eg014606	Egrandis_v1_0.014606m.g
Eucalyptus grandis	Eg053624	Egrandis_v1_0.053624m.g
Glycine max	20210Gm	Glyma11g20200.1
Glycine max	16308891Gm	Glyma18g15410
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Glycine max	16312889Gm	Glyma19g26560
Glycine max	16305134Gm	Glyma17g10760
Glycine max	16247769Gm	Glyma02g11780
Glycine max	16301621Gm	Glyma16g05840
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Glycine max	16288241Gm	Glyma12g28970
Glycine max	16257920Gm	Glyma05g01130
Glycine max	16267977Gm	Glyma07g25430
Glycine max	16300993Gm	Glyma16g00580
Glycine max	16311152Gm	Glyma18g51580
Glycine max	16263902Gm	Glyma06g23410
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Glycine max	16289957Gm	Glyma13g07480
Glycine max	16312005Gm	Glyma19g05910
Glycine max	16305405Gm	Glyma17g13060
Glycine max	16292624Gm	Glyma13g34690
Glycine max	16305529Gm	Glyma17g14160
Glycine max	16281410Gm	Glyma10g38510
Glycine max	16287440Gm	Glyma12g14200
Glycine max	16281483Gm	Glyma10g39140
Glycine max	16290997Gm	Glyma13g20710
Glycine max	16258200Gm	Glyma05g03610
Glycine max	16256517Gm	Glyma04g32340
Glycine max	16291962Gm	Glyma13g29160
Glycine max	16250847Gm	Glyma03g02090
Glycine max	16292871Gm	Glyma13g36840
Glycine max	16289009Gm	Glyma12g35720
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Glycine max	16287845Gm	Glyma12g20160
Glycine max	16272765Gm	Glyma08g28690
Glycine max	16265078Gm	Glyma06g43720
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Glycine max	16270643Gm	Glyma08g10350
Glycine max	16311029Gm	Glyma18g50370
Glycine max	16311812Gm	Glyma19g03810
Glycine max	16257826Gm	Glyma05g00300
Glycine max	16278059Gm	Glyma09g42140
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Glycine max	16288777Gm	Glyma12g33640
Glycine max	16266669Gm	Glyma07g08710
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Glycine max	16317250Gm	Glyma20g29330
Glycine max	16316582Gm	Glyma20g23700
Glycine max	16317170Gm	Glyma20g28670
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Manihot esculenta	17981115Me	cassava4.1_011082m.g
Manihot esculenta	17987200Me	cassava4.1_004517m.g
Manihot esculenta	17967082Me	cassava4.1_013743m.g
Manihot esculenta	17960265Me	cassava4.1_032556m.g
Manihot esculenta	17962543Me	cassava4.1_034188m.g
Manihot esculenta	17968936Me	cassava4.1_025363m.g
Manihot esculenta	17972262Me	cassava4.1_006620m.g
Manihot esculenta	17962796Me	cassava4.1_028058m.g
Manihot esculenta	17963214Me	cassava4.1_032088m.g
Manihot esculenta	17987558Me	cassava4.1_022722m.g
Medicago truncatula	17482774Mt	Medtr8g112220
Medicago truncatula	17473522Mt	Medtr7g018180
Medicago truncatula	17446280Mt	Medtr2g132520
Mimulus guttatus	17684730Mg	mgv1a012180m.g
Mimulus guttatus	17680013Mg	mgv1a006425m.g
Mimulus guttatus	17686198Mg	mgv1a006538m.g
Mimulus guttatus	17695167Mg	mgv1a022535m.g
Mimulus guttatus	17675517Mg	mgv1a010742m.g
Mimulus guttatus	17687507Mg	mgv1a023603m.g
Mimulus guttatus	17690687Mg	mgv1a010901m.g
Mimulus guttatus	17671707Mg	mgv1a005762m.g
Mimulus guttatus	17691503Mg	mgv1a011793m.g
Mimulus guttatus	17697396Mg	mgv1a011591m.g
Mimulus guttatus	17693093Mg	mgv1a006727m.g
Mimulus guttatus	17696794Mg	mgv1a013098m.g
Mimulus guttatus	17687164Mg	mgv1a020323m.g
Mimulus guttatus	17692947Mg	mgv1a017886m.g
Mimulus guttatus	17676020Mg	mgv1a006656m.g
Mimulus guttatus	17686317Mg	mgv1a025043m.g
Mimulus guttatus	17681482Mg	mgv1a011892m.g
Mimulus guttatus	17672532Mg	mgv1a011205m.g
Mimulus guttatus	17674803Mg	mgv1a021669m.g
Mimulus guttatus	17677950Mg	mgv1a014634m.g
Oryza sativa	OsTCP21	Os07g05720
Oryza sativa	OsTCP1	Os01g11550
Oryza sativa	OsTCP12	Os03g30880
Oryza sativa	OsTCP17	Os04g44440
Oryza sativa	OsTCP26	Os11g07460
Oryza sativa	OsTCP7	Os02g42380
Oryza sativa	OsTCP15	Os04g11830
Oryza sativa	OsTCP28	Os12g07480

Oryza sativa	OsTCP19	Os06g12230
Oryza sativa	OsTCP9	Os02g51280
Oryza sativa	OsTCP23	Os08g43160
Oryza sativa	OsTCP16	Os01g69980
Oryza sativa	OsTCP25	Os09g34950
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Oryza sativa	16869526Os	Os07g05720
Oryza sativa	16843170Os	Os02g51310
Oryza sativa	16835080Os	Os01g55750
Oryza sativa	16881524Os	Os09g24480
Oryza sativa	16849564Os	Os03g49880
Oryza sativa	16877682Os	Os08g33530
Oryza sativa	16862301Os	Os05g43760
Physcomitrella patens	18039912Ph	Pp1s332_35V6
Physcomitrella patens	18041192Ph	Pp1s207_110V6
Physcomitrella patens	18063809Ph	Pp1s348_6V6
Physcomitrella patens	18068748Ph	Pp1s446_21V6
Physcomitrella patens	18050840Ph	Pp1s67_183V6
Physcomitrella patens	18042157Ph	Pp1s356_40V6
Physcomitrella patens	110V6Ph	XM_001782432
Populus trichocarpa	18209605Pt	POPTR_0017s09820
Populus trichocarpa	18216113Pt	POPTR_0003s16630
Populus trichocarpa	18231329Pt	POPTR_0011s05430
Populus trichocarpa	18220074Pt	POPTR_0019s11120
Populus trichocarpa	18221392Pt	POPTR_0013s11510
Populus trichocarpa	18234285Pt	POPTR_0001s13500
Populus trichocarpa	18225061Pt	POPTR_0004s04600
Populus trichocarpa	18225571Pt	POPTR_0004s23080
Populus trichocarpa	18232641Pt	POPTR_0015s06980
Populus trichocarpa	18238295Pt	POPTR_0001s33470
Populus trichocarpa	18209353Pt	POPTR_0017s13980
Populus trichocarpa	18234142Pt	POPTR_0015s13660
Populus trichocarpa	18246527Pt	POPTR_0002s15360
Populus trichocarpa	18230603Pt	POPTR_0011s09890
Populus trichocarpa	18230206Pt	POPTR_0012s05660
Populus trichocarpa	18240586Pt	POPTR_0010s14030
Populus trichocarpa	18236843Pt	POPTR_0001s08590
Populus trichocarpa	18229840Pt	POPTR_0012s13700
Populus trichocarpa	18226839Pt	POPTR_0004s11510
Populus trichocarpa	18220855Pt	POPTR_0013s12370
Populus trichocarpa	18233253Pt	POPTR_0015s03140
Populus trichocarpa	18225754Pt	POPTR_0004s06440
Populus trichocarpa	18218990Pt	POPTR_0019s12110
Populus trichocarpa	18227148Pt	POPTR_0009s01480
Populus trichocarpa	18206849Pt	POPTR_0005s09250
Populus trichocarpa	18231968Pt	POPTR_0011s02350
Populus trichocarpa	18209307Pt	POPTR_0017s13050
Populus trichocarpa	18223745Pt	POPTR_0014s07450
Populus trichocarpa	18239062Pt	POPTR_0001s38480
Populus trichocarpa	18251033Pt	POPTR_0016s11350
Prunus persica	17647871Pp	ppa010032m.g
Prunus persica	17648345Pp	ppa017864m.g
Prunus persica	17645138Pp	ppa006389m.g
Prunus persica	17646741Pp	ppa009925m.g

Prunus persica	17666244Pp	ppa022140m.g
Prunus persica	17661007Pp	ppa021535m.g
Prunus persica	17664732Pp	ppa027156m.g
Prunus persica	17666782Pp	ppa016240m.g
Prunus persica	17651445Pp	ppa018648m.g
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Prunus persica	17664952Pp	ppa004612m.g
Prunus persica	17641009Pp	ppa014630m.g
Prunus persica	17660534Pp	ppb024383m.g
Prunus persica	17660278Pp	ppa007094m.g
Prunus persica	17668341Pp	ppa015342m.g
Prunus persica	17650534Pp	ppa004661m.g
Ricinus communis	16817575Rc	30093.t000015
Ricinus communis	16820989Rc	30167.t000005
Ricinus communis	16819325Rc	30138.t000133
Ricinus communis	16805939Rc	29693.t000006
Ricinus communis	16822587Rc	30174.t000341
Ricinus communis	16815667Rc	30014.t000010
Ricinus communis	16807331Rc	29738.t000043
Ricinus communis	16804611Rc	29646.t000049
Ricinus communis	16823710Rc	30192.t000004
Selaginella moellendorffii	CAOT1262Sm	CAOT1262
Selaginella moellendorffii	15407669Sm	XM_002962733
Sellaginella moellendorffii	15406972Sm	15406972_locus
Sellaginella moellendorffii	15407054Sm	15407054_locus
Sellaginella moellendorffii	15419540Sm	15419540_locus
Setaria italica	18197064Si	SiPROV028309m.g
Setaria italica	18173673Si	SiPROV030445m.g
Setaria italica	18176917Si	SiPROV009299m.g
Setaria italica	18188805Si	SiPROV027784m.g
Setaria italica	18184307Si	SiPROV035672m.g
Setaria italica	18185750Si	SiPROV034597m.g
Setaria italica	18182019Si	SiPROV009824m.g
Setaria italica	18205895Si	SiPROV037094m.g
Setaria italica	18196462Si	SiPROV011671m.g
Setaria italica	18180899Si	SiPROV015319m.g
Setaria italica	18193228Si	SiPROV035277m.g
Setaria italica	18169927Si	SiPROV016156m.g
Setaria italica	18175983Si	SiPROV016702m.g
Setaria italica	18170681Si	SiPROV029159m.g
Sorghum bicolor	1972374Sb	Sb06g016340
Sorghum bicolor	1981475Sb	Sb09g025340
Sorghum bicolor	1963332Sb	Sb03g034918
Sorghum bicolor	1977676Sb	Sb08g004610
Sorghum bicolor	1950026Sb	Sb01g006020
Sorghum bicolor	1958290Sb	Sb02g030260
Sorghum bicolor	1976099Sb	Sb07g021140
Sorghum bicolor	1971716Sb	Sb06g002260
Sorghum bicolor	1955624Sb	Sb02g003070
Sorghum bicolor	1967363Sb	Sb04g026970
Sorghum bicolor	1964442Sb	Sb03g044320
Sorghum bicolor	1983141Sb	Sb10g008030
Sorghum bicolor	1963385Sb	Sb03g035350

Sorghum bicolor	1969405Sb	Sb05g004800
Sorghum bicolor	1950625Sb	Sb01g010690
Sorghum bicolor	1979098Sb	Sb08g021690
Sorghum bicolor	1967495Sb	Sb04g027960
Sorghum bicolor	1957550Sb	Sb02g024450
Sorghum bicolor	1968723Sb	Sb04g038140
Sorghum bicolor	1977675Sb	Sb08g004600
Sorghum bicolor	1960224Sb	Sb03g001940
Sorghum bicolor	1973218Sb	Sb06g023130
Vitis vinifera	17820778Vv	GSVIVG01008109001
Vitis vinifera	17829521Vv	GSVIVG01020011001
Vitis vinifera	17831815Vv	GSVIVG01023283001
Vitis vinifera	17820701Vv	GSVIVG01008023001
Vitis vinifera	17830615Vv	GSVIVG01021528001
Vitis vinifera	17829974Vv	GSVIVG01020666001
Vitis vinifera	17841387Vv	GSVIVG01036449001
Vitis vinifera	17834941Vv	GSVIVG01027588001
Vitis vinifera	17820873Vv	GSVIVG01008234001
Vitis vinifera	17825262Vv	GSVIVG01014236001
Vitis vinifera	17830339Vv	GSVIVG01021167001
Vitis vinifera	17838763Vv	GSVIVG01032911001
Vitis vinifera	17829417Vv	GSVIVG01019876001
Vitis vinifera	17823706Vv	GSVIVG01011962001
Vitis vinifera	17833975Vv	GSVIVG01026145001
Zea mays	ZM2G142751	GRMZM2G142751
Zea mays	ZM2G093895	GRMZM2G093895
Zea mays	ZM2G077755	GRMZM2G077755
Zea mays	ZM2G003944	GRMZM2G003944
Zea mays	ZM2G089361	GRMZM2G089361
Zea mays	ZM2G166946	GRMZM2G166946
Zea mays	ZM2G120151	GRMZM2G120151
Zea mays	ZM2G178603	GRMZM2G178603
Zea mays	ZM2G096610	GRMZM2G096610
Zea mays	ZM2G445944	GRMZM2G445944
Zea mays	ZMAC199782	AC199782
Zea mays	ZM2G020805	GRMZM2G020805
Zea mays	ZM2G166687	GRMZM2G166687
Zea mays	ZM2G064628	GRMZM2G064628
Zea mays	ZM2G078077	GRMZM2G078077
Zea mays	ZM2G465091	GRMZM2G465091
Zea mays	ZMAC233950	AC233950
Zea mays	ZMAC190734	AC190734
Zea mays	ZMAC205574	AC205574
