

Table S1A Assessment by EST mapping (P450 all original)

Species	NoEST	NoIntR	NoIntQ	IntTP	IntFP	IntFN	JuncTP	IntHS_TP
Aquicoer	144	385	389	367	6	1	751	1
Arablyra	79	163	171	153	8	0	312	5
Arabthal	239	658	659	650	3	2	1305	1
Bracdist	64	208	209	204	2	1	411	2
Brasrapa	80	171	174	162	5	0	331	3
Camesine	38	173	173	170	0	0	342	0
Caripapa	30	59	61	56	2	0	114	2
Chlarein	15	101	105	100	1	0	200	0
Chlovulg	17	67	67	64	0	0	131	0
Citrclm	95	169	175	167	6	1	335	3
Coccsube	15	61	62	60	0	0	122	0
Cucusati	174	535	548	514	15	3	1045	4
Eucagran	54	72	74	68	2	0	140	2
Fragvesc	187	572	587	510	16	3	1066	5
Glycmax_	234	708	720	700	10	0	1407	2
Gossraim	139	361	370	344	15	3	702	10
Jatrcurc	28	50	54	47	3	0	98	1
Lotujapo	11	21	21	20	0	0	40	0
Maniescu	58	102	106	100	3	0	201	2
Meditrun	109	328	330	325	4	1	650	2
Micrpusi	1	1	1	1	0	0	2	0
Mimugutt	96	223	230	219	9	2	439	0
Oryzsati	260	699	703	681	5	2	1375	3
Ostrluci	2	2	2	2	0	0	4	0
Phasvulg	62	155	157	152	3	0	306	1
Physpate	68	240	242	235	2	1	471	0
Poputric	105	350	342	321	7	10	656	2
Prunpers	38	65	75	65	10	0	130	9
Ricicomm	205	565	565	563	1	1	1126	0
Selamoel	52	169	169	167	1	1	335	0
Solalyco	123	302	307	296	7	2	596	6
Solatube	136	248	249	235	7	6	478	3
Sorgbico	138	333	334	332	1	0	664	0
Thelhalo	35	93	97	89	3	0	182	2
Theocaca	82	172	176	164	5	0	334	2
Vitivini	195	506	644	485	143	3	978	22
Volvcart	8	35	34	31	0	1	65	0
Zea_mays	213	550	553	539	6	5	1080	3
Total	3629	9672	9935	9358	311	49	18924	98

	Raw	with HS_TP
IntSn	98	98.54545
IntSp	97.46835	98.01085
JncSn	98.18182	98.72727
JncSp	97.64919	98.19168
FPR	3.130347	2.143936
FNR	0.506617	0.506617

Table S1B Assessment by EST mapping (RBP all original)

Species	NoEST	NoIntR	NoIntQ	IntTP	IntFP	IntFN	JuncTP	IntHS_TP
Aquicoer	205	680	692	656	16	3	1331	14
Arablyra	263	740	755	711	7	0	1434	3
Arabthal	395	1090	1099	1078	5	1	2169	3
Bracdist	339	983	990	963	5	0	1943	2
Brasrapa	376	1012	1018	981	13	5	1986	11
Camesine	208	528	527	500	4	5	1020	0
Caripapa	177	466	477	455	9	0	920	3
Chlarein	121	428	427	425	0	0	852	0
Chlovulg	116	394	392	386	0	0	778	0
Citrclem	254	706	707	689	4	1	1394	3
Coccsube	90	305	304	300	0	0	603	0
Cucusati	389	1147	1145	1102	5	2	2246	2
Eucagran	283	796	802	731	11	3	1508	6
Fragvesc	200	592	603	557	11	1	1141	1
Glycmax_	657	1978	1994	1945	16	1	3915	4
Gossrain	406	1209	1213	1107	15	4	2287	11
Maniescu	336	991	997	951	9	1	1934	5
Meditrun	209	613	621	609	5	0	1224	2
Micrpusi	63	106	109	105	3	0	210	3
Micrrcc2	65	103	102	96	0	1	194	0
Mimugutt	279	880	884	874	4	0	1754	1
Oryzsati	334	966	976	950	4	0	1918	3
Ostrluci	74	102	102	101	0	0	202	0
Ostrrcc8	28	38	43	36	5	0	73	5
Phasvulg	263	805	810	801	5	0	1606	0
Physpate	466	1372	1386	1359	11	0	2732	4
Poputric	659	2044	2031	1923	22	13	3928	6
Prunpers	199	570	570	566	1	0	1135	0
Ricicomm	235	713	713	712	0	0	1424	0
Selamoel	91	268	268	263	1	1	529	1
Solalyco	271	844	852	825	8	0	1668	5
Solatube	313	918	914	889	2	4	1799	1
Sorgbico	280	824	828	819	4	0	1642	1
Thelhalo	216	608	608	598	2	1	1204	2
Theocaca	286	804	810	768	6	2	1566	3
Vitivini	236	680	720	671	38	0	1352	10
Volvcart	122	419	421	414	1	0	834	0
Zea_mays	765	1976	1975	1892	18	7	3833	13
<b>Total</b>	<b>10269</b>	<b>29698</b>	<b>29885</b>	<b>28808</b>	<b>270</b>	<b>56</b>	<b>58288</b>	<b>128</b>

	Raw	with HS_TP
IntSn	95.74899	96.40688
IntSp	95.79747	96.4557
JncSn	96.98887	97.64676
JncSp	97.03797	97.6962
FPR	0.903463	0.475155
FNR	0.188565	0.188565

Table S1C Assessment by EST mapping (P450 filtered original)

Species	NoEST	NoIntR	NoIntQ	IntTP	IntFP	IntFN	JuncTP	IntHS_FP
Aquicoer	89	204	208	199	5	1	402	1
Arablyra	74	159	167	149	8	0	304	5
Arabthal	193	508	507	503	1	2	1009	1
Bracdist	52	153	154	152	1	0	305	0
Brasrapa	72	162	165	155	5	0	315	3
Camesine	11	41	41	41	0	0	82	0
Caripapa	25	51	53	49	2	0	100	2
Chlarein	13	89	93	88	1	0	176	0
Chlovulg	11	46	46	45	0	0	91	0
Citrclem	72	123	127	121	4	1	243	2
Coccsube	10	44	45	43	0	0	88	0
Cucusati	147	405	413	390	9	2	793	4
Eucagran	39	56	56	55	0	0	111	0
Fragvesc	135	455	462	406	10	1	849	5
Glycmax_	186	532	538	528	5	0	1060	1
Gossrain	80	162	169	158	9	2	318	6
Jatrcurc	19	36	40	34	3	0	71	1
Lotujapo	10	18	18	17	0	0	34	0
Maniescu	42	72	75	70	2	0	141	2
Meditrun	92	271	271	268	2	1	536	2
Micrpusi	1	1	1	1	0	0	2	0
Mimugutt	80	183	191	181	9	1	363	0
Oryzsati	195	497	503	487	5	1	983	3
Ostrluci	1	1	1	1	0	0	2	0
Phasvulg	53	128	131	127	3	0	254	1
Physpate	43	147	147	143	0	1	287	0
Poputric	51	136	137	130	5	4	262	1
Prunpers	36	64	73	64	9	0	128	9
Ricicomm	143	454	454	454	0	0	908	0
Selamoel	40	136	136	135	0	0	271	0
Solalyco	117	278	282	272	6	2	548	6
Solatube	77	165	165	159	2	3	322	2
Sorgbico	121	279	279	278	0	0	556	0
Thelhalo	31	82	84	80	1	0	162	0
Theocaca	48	99	100	97	1	0	196	0
Vitivini	119	371	443	362	72	0	728	22
Volvcart	5	24	23	20	0	1	43	0
Zea_mays	152	403	408	398	5	2	798	3
Total	2685	7035	7206	6860	185	25	13841	82

	Raw	2ith HS_TP
IntSn	98.75931	99.50372
IntSp	97.54902	98.28431
JncSn	99.00744	99.75186
JncSp	97.79412	98.52941
FPR	2.567305	1.429364
FNR	0.355366	0.355366

Table S1D Assessment by EST mapping (RBP filtered original)

Species	NoEST	NoIntR	NoIntQ	IntTP	IntFP	IntFN	JuncTP	IntHS_TP
Aquicoer	114	372	379	365	9	2	734	9
Arablyra	262	738	753	709	7	0	1430	3
Arabthal	288	811	818	805	3	1	1618	2
Bracdist	244	719	724	709	4	0	1428	1
Brasrapa	372	1006	1011	975	12	5	1974	11
Camesine	99	260	257	249	1	4	505	0
Caripapa	162	423	434	413	9	0	835	3
Chlarein	97	348	348	347	0	0	695	0
Chlovulg	104	352	352	350	0	0	702	0
Citrclcm	166	471	473	466	4	1	936	3
Coccsube	83	281	281	278	0	0	558	0
Cucusati	236	702	704	685	4	1	1387	1
Eucagran	169	460	460	439	2	2	893	0
Fragvesc	188	554	564	529	7	1	1080	1
Glycmax_	484	1501	1515	1475	14	1	2970	4
Gossraim	184	548	550	516	8	4	1053	6
Maniescu	242	731	732	718	3	1	1445	2
Meditrun	178	536	544	532	5	0	1070	2
Micrpusi	61	102	105	101	3	0	202	3
Micrrcc2	61	96	95	89	0	1	180	0
Mimugutt	219	678	683	676	4	0	1354	1
Oryzsati	263	777	785	767	1	0	1549	1
Ostrluci	69	94	94	93	0	0	186	0
Ostrrcc8	26	35	40	33	5	0	67	5
Phasvulg	237	739	744	736	5	0	1475	0
Physpate	385	1115	1124	1105	6	0	2222	1
Poputric	346	1079	1069	1033	5	10	2096	2
Prunpers	184	529	528	526	0	0	1054	0
Ricicomm	229	688	688	687	0	0	1374	0
Selamoel	87	257	257	253	1	1	508	1
Solalyco	269	833	841	814	8	0	1646	5
Solatube	246	743	741	729	2	2	1468	0
Sorgbico	256	764	768	762	3	0	1527	1
Thelhalo	181	514	514	509	2	1	1021	2
Theocaca	198	574	581	554	4	1	1126	2
Vitivini	227	661	700	653	37	0	1315	9
Volvcart	94	318	318	314	0	0	632	0
Zea_mays	459	1250	1239	1196	3	6	2426	2
Total	7769	22659	22813	22190	181	45	44741	83

	Raw	with HS_TP
IntSn	97.93018	98.29648
IntSp	97.2691	97.63293
JncSn	98.72678	99.09308
JncSp	98.06032	98.42414
FPR	0.793407	0.42958
FNR	0.198597	0.198597

Table S1E Assessment by EST mapping (P450 refined)

Species	NoEST	NoIntR	NoIntQ	IntTP	IntFP	IntFN	JuncTP	IntHS_TP
Aquicoer	86	201	204	197	3	1	398	1
Arablyra	73	157	159	151	2	1	307	1
Arabthal	193	502	516	488	5	1	987	5
Bracdist	53	150	152	148	1	0	298	2
Brasrapa	68	161	167	158	3	0	318	2
Camesine	11	42	41	40	0	1	81	0
Caripapa	25	51	54	48	3	0	99	2
Chlarein	11	81	81	81	0	0	162	0
Chlovulg	11	46	46	46	0	0	92	0
Citrclem	71	121	124	120	3	0	241	3
Coccsube	10	43	43	43	0	0	86	0
Cucusati	144	407	412	395	5	3	800	4
Eucagran	37	56	56	55	0	0	111	0
Fragvesc	138	455	457	448	0	0	902	0
Glycmax_	186	532	537	526	4	0	1058	0
Gossraim	80	162	171	162	9	0	324	8
Jatrcurc	17	34	36	34	2	0	68	0
Lotujapo	10	18	19	16	0	0	34	0
Maniescu	42	72	75	71	2	0	142	1
Meditrun	93	256	266	245	12	1	497	5
Micrpusi	1	1	1	1	0	0	2	0
Mimugutt	77	184	193	181	2	1	364	0
Oryzsati	195	494	495	476	7	1	961	3
Ostrluci	1	1	2	1	1	0	2	0
Phasvulg	53	128	130	127	2	0	254	1
Physpate	45	145	149	134	4	1	273	1
Poputric	50	137	135	129	2	4	262	0
Prunpers	35	62	71	62	9	0	124	9
Ricicomm	142	437	434	418	2	6	844	1
Selamoel	37	122	123	119	0	0	242	0
Solalyco	117	277	283	272	8	2	547	7
Solatube	76	171	169	167	0	2	335	0
Sorgbico	120	276	275	272	0	1	547	0
Thelhalo	31	81	83	79	1	0	161	1
Theocaca	46	96	97	93	1	0	189	1
Vitivini	119	368	369	367	2	1	734	1
Volvcart	5	24	24	20	1	1	42	0
Zea_mays	150	403	410	400	8	1	802	3
Total	2659	6954	7059	6790	104	29	13690	62

	Raw	with HS_TP
IntSn	97.64165	98.53322
IntSp	96.18926	97.06757
JncSn	98.43256	99.32413
JncSp	96.96841	97.84672
FPR	1.473297	0.594985
FNR	0.417026	0.417026

Table S1F Assessment by EST mapping (RBP refined)

Species	NoEST	NoIntR	NoIntQ	IntTP	IntFP	IntFN	JuncTP	IntHS_TP
Aquicoer	111	366	377	361	12	0	725	10
Arablyra	262	738	749	731	6	0	1467	4
Arabthal	289	803	809	797	7	2	1597	5
Bracdist	242	709	711	706	1	0	1416	0
Brasrapa	374	1027	1042	1013	13	1	2038	11
Camesine	99	259	259	245	1	1	496	1
Caripapa	162	426	436	419	10	0	844	3
Chlarein	97	344	342	341	0	0	684	0
Chlovulg	104	359	355	351	0	0	708	0
Citrclem	165	473	479	470	6	1	943	2
Coccsube	83	283	279	270	0	0	551	0
Cucusati	236	712	718	686	5	1	1389	3
Eucagran	168	448	453	438	3	0	887	1
Fragvesc	185	543	548	533	6	0	1070	2
Glycmax_	495	1528	1551	1482	18	0	3002	10
Gossrain	184	549	559	538	9	1	1083	8
Maniescu	240	717	720	705	8	0	1418	4
Meditrun	170	478	485	471	10	0	946	6
Micrpusi	58	100	104	96	4	0	196	3
Micrrcc2	61	94	98	93	4	0	186	3
Mimugutt	217	667	675	655	6	0	1318	2
Oryzsati	271	787	810	774	16	0	1559	9
Ostrluci	70	92	96	88	5	2	178	3
Ostrrcc8	26	38	45	37	6	0	76	5
Phasvulg	239	727	733	721	8	0	1447	3
Physpate	395	1105	1140	1072	30	0	2174	10
Poputric	344	1055	1059	1039	9	3	2089	6
Prunpers	183	518	519	513	0	0	1030	0
Ricicomm	221	639	638	610	2	2	1240	2
Selamoel	95	273	279	265	7	0	534	4
Solalyco	268	812	814	798	5	0	1607	4
Solatube	252	757	761	748	7	2	1501	3
Sorgbico	257	753	762	743	7	0	1493	5
Thelhalo	181	511	514	509	2	0	1021	2
Theocaca	201	569	571	557	3	0	1124	1
Vitivini	216	654	660	644	8	0	1296	3
Volvcart	94	318	318	315	0	0	632	0
Zea_mays	470	1251	1271	1187	27	3	2421	12
Total	7785	22482	22739	22021	271	19	44386	150

	Raw	with HS_TP
IntSn	97.94947	98.61667
IntSp	96.84243	97.50209
JncSn	98.71453	99.38173
JncSp	97.59884	98.2585
FPR	1.191785	0.532125
FNR	0.084512	0.084512

Table S2A Mnual Assessment of Peach P450 Genes

KOG-PID	PeachID	Subfamily	Chrom.	Strand	Cluster	Phytozome	Comment	Refs	Comment
17641033	ppa005745m	CYP88A	5	-	16	E	short N	C	
17641081	ppa026875m	CYP715A	2	+	394	C		C	
17641236			5	+	0	F	173aa	F	
17641348	ppa004078m	CYP86A	5	-	420	C		C	
17641366	ppa023692m	CYP734A	1	+	374	C		C	
17641500	ppb017968m		1	+	0	F	243aa	F	G?
17641532	ppa002280m	reductase	1	+	480	X		X	
17641582	ppa018300m		4	-	0	F	194aa	F	
17641722	ppa016513m	CYP81B	1	+	249	E	short C	C	
17641732	ppa004569m	CYP82G	8	-	222	E	extra I	C	
17642122	ppa004592m	CYP94C	6	-	437	C		C	
17642372	ppa019319m	CYP94A	8	-	447	E	non start codon	C	
17642385	ppa017703m	CYP82C	1	-	209	E	short N	C	
17642457	ppa023623m	CYP720A	5	+	49	C		C	
17642522	ppa005059m	CYP707A	5	+	4	C		C	
17643034	ppa026777m	CYP734A	7	+	382	C		C	
17643059	ppa026952m	CYP76F	1	+	149	C		C	
17643169	ppa017300m	CYP82C	3	-	211	C		C	
17643207	ppa026370m	CYP77B	7	+	286	C		C	
17643213	ppa003997m	CYP78A	2	-	274	E	extra I	C	
17643387	ppa019821m	CYP93A	7	+	225	C		C	
17643533	ppa019694m		1	+	0	F	143aa	F	
17643605	ppa004444m	CYP94A	8	-	447	C		C	
17643882	ppa027164m	CYP706A	5	+	200	C		C	
17643885	ppa017464m	CYP82C	1	-	215	E	short N	C	
17643926	ppa004832m	CYP92A	7	-	173	E	extra I	c	FS
17644135	ppa004606m	CYP76F	5	-	149	C		C	
17644145	ppa015588m	CYP734A	1	-	374	C		C	
17644410	ppa017328m	CYP725A	4	-	21	C		C	
17644601	ppb018168m		1	+	0	F	180aa	F	
17644659	ppa022132m	CYP76F	1	-	149	C		C	
17644816	ppa004443m	CYP76F	8	+	282	E	many defects	C	
17645100	ppa023159m		1	+	0	F	99aa	F	
17645137	ppa017206m	CYP71A	3	-	119	C		C	
17645204	ppa003882m	CYP78A	5	-	276	C		C	
17645260	ppa018724m	CYP734A	1	-	374	C		C	
17645473	ppa024054m		5	+	0	F	243aa	F	
17645509	ppa020034m	CYP93B	6	-	232	C		C	
17645715	ppa004404m	CYP98A	1	+	163	C		C	
17645828	ppa004496m	CYP714A	6	-	400	E	short N	C	
17645872	ppa023495m	CYP82A	1	-	211	C		C	
17645874	ppa004414m	CYP72X	1	-	363	C		C	
17645889	ppa004390m	CYP71B	1	-	123	C		C	
17645942	ppa015526m	CYP72A	4	+	351	E	extra I	c	FS
17646105	ppa025666m	CYP716A	6	-	34	E	extra E	C	
17646117	ppa018082m	CYP712A	2	-	240	C		c	short N 3aa
17646196	ppa024213m	CYP78A	1	-	271	C		C	
17646410	ppa022359m	CYP704A	2	+	465	C		C	
17646594	ppa019974m		2	+	465	P	many defects	P	many defects
17646693	ppa003980m	CYP89A	2	+	287	C		C	
17646705	ppa003405m	CYP97B	3	+	412	C		C	
17646731	ppa004199m	CYP89A	2	+	287	C		C	
17647258	ppa017795m	CYP82C	1	-	211	P	short N	P	
17647335	ppa004034m	CYP86A	2	-	419	C		C	
17647395	ppa004169m	CYP82A	1	-	211	C		C	
17647582	ppa006310m	CYP72A	4	+	351	E	short N	C	
17647602	ppa019218m	CYP706A	5	+	200	E	short N	C	
17647730	ppa023100m	CYP734A	1	-	374	E	short N	C	
17647741	ppa019068m	CYP92A	2	+	188	C		C	
17647755	ppa017688m	CYP71A?	5	+	186	E	extra I	c	FS
17647775	ppa018639m	CYP735A	3	-	387	C		C	
17647819	ppa017772m		1	-	0	F	132aa	F	
17647937	ppa004261m	CYP71A	5	-	119	C		C	
17647986	ppa017053m		7	+	0	F	156aa	F	
17648032	ppa024382m	CYP87A	8	-	62	C		C	
17648033	ppa005020m	CYP707A	6	+	7	C		C	
17648154	ppa005225m	CYP716A	4	-	37	C		C	
17648300	ppa004999m	CYP716A	4	-	37	C		C	
17648302	ppa018515m		6	+	0	F	180aa	F	
17648355	ppa014656m		1	+	0	F	151aa	F	
17648436	ppa1027202m	CYP710A	4	-	470	c	7aa short N	C	
17648601	ppa005322m	CYP706A	5	+	194	E	short N	C	

17648621	ppa005465m	CYP725A	6	+	20	E	extra I	C	
17648680	ppa004329m	CYP734A	1	-	374	C		C	
17648717	ppa019886m	CYP81B	1	+	254	E	extra I	C	
17648736	ppa024099m	CYP706A	5	+	194	E	short N	C	
17648820	ppa018268m	CYP76A	7	-	142	C		c	1aa short N
17648862	ppa023510m	CYP82C	8	+	223	C		C	
17648959	ppa004947m	CYP704A	2	+	461	E	extra I	C	
17649004	ppa023299m	CYP76F	1	+	149	E	long D	c	FS
17649063	ppa024021m	CYP81B	1	-	245	E	short N; extra I	C	
17649198	ppa005988m	CYP707A	7	+	13	E	missing E	C	
17649311	ppa019443m	CYP706A	5	+	200	E	short N	E	extra I
17649531	ppa004095m	CYP82G	8	-	222	C		C	
17649549	ppa022722m		1	+	249	P		P	FS
17649579	ppa016446m	CYP72A	1	-	351	C		C	
17649969	ppa024360m	CYP90D	3	+	50	C		C	
17650111	ppa004988m	CYP716A	1	-	26	C		C	
17650252	ppa004639m	CYP77F	1	+	149	C		C	
17650355	ppa017329m	CYP76F	1	+	149	E	extra I	C	
17650379	ppa016822m	CYP722A	1	+	2	C		C	
17650462	ppa018839m	CYP71D	3	+	78	c	3aa short N	C	
17650487	ppa011895m		1	-	0	F	192aa	F	
17650575	ppa021608m		5	+	0	F	135aa	F	
17650747	ppa023634m		1	-	0	F	312aa	F	
17650776	ppa005226m	CYP707A	8	-	8	C		C	
17650839			4	-	0	F	74aa	F	
17650968	ppa004617m	CYP76F	1	+	149	C		C	
17650973	ppa005500m	CYP725A	6	+	20	E	short N	C	
17651200	ppa026664m	CYP89A	5	-	304	C		C	
17651265	ppa022977m	CYP71A	4	-	106	P	many defects	P	some defects
17651273	ppa026995m		2	-	0	F	155aa	F	
17651331	ppa019918m		2	-	0	F	303aa	F	
17651416	ppa022312m	CYP93A	7	+	225	E	missing E x 2	c	FS
17651466	ppa016887m	CYP734A	8	+	374	C		C	
17651481	ppa005234m	CYP707A	1	+	8	C		C	
17651573	ppa021326m	CYP79D	6	+	314	E	short N	C	
17651808	ppa019129m		6	-	0	F	187aa	F	
17651873	ppa016904m	CYP704A	2	+	465	C		C	
17651883	ppa004175m	CYP83A	1	-	211	C		C	
17651909	ppa004271m	CYP72A	4	+	351	C		C	
17652064	ppa004356m	CYP89A	2	+	287	C		C	
17652232	ppa022777m	CYP92A	7	+	173	C		C	
17652233	ppa015528m		1	-	0	F	219aa	F	
17652304	ppa017406m		4	-	0	F	331aa	F	
17652428	ppa019048m	CYP92A	7	+	173	C		C	
17652470	ppa015200m	CYP82C	1	-	215	E	short N	C	
17652600			1	-	0	F	102aa	F	
17652612	ppa026652m	CYP92A	4	+	188	C		C	
17652654	ppa004503m	CYP76F	2	-	149	C		C	
17652656	ppa026874m		1	-	0	F	338aa	F	
17652743	ppa004664m	CYP92A	4	-	188	C		C	
17652852	ppa027160m	CYP82C	3	-	211	C		C	
17652931	ppa004467m	CYP94D	5	-	450	C		C	
17652968	ppa026124m	CYP704A	2	+	461	C		C	
17653004			8	+	0	F	178aa	F	
17653014	ppa016631m		6	-	0	F	380aa	F	G?
17653353	ppa026596m		1	+	0	F	86aa	F	
17653792	ppa015856m	CYP724A	3	-	43	E	short N	C	
17654039	ppa018745m	CYP87A	5	+	55	E	extra I	C	
17654058	ppa004373m	CYP77A	2	-	284	C		C	
17654300	ppa015948m		1	0	0	F	130aa	F	
17654330	ppa012947m		5	-	0	F	148aa	F	
17654341	ppa021340m		6	-	0	F	185aa	F	
17654437	ppa003950m	CYP711	1	+	329	C		C	
17654549			3	-	0	F	131aa	F	
17654756			6	+	0	F	144aa	F	
17654762	ppa017476m	CYP82C	1	-	215	F	short N	F	many defects
17654770	ppa004328m	CYP72B	1	+	374	C		C	
17654811	ppa025865m		8	+	0	F	332aa	F	
17654823	ppa004332m	CYP71A	5	-	106	C		C	
17654861	ppa017915m	CYP724A	1	+	351	C		E	short N
17654864	ppa018687m	CYP712A	7	+	241	E	extra E	C	
17654919			4	-	0	F	69aa	F	
17654960	ppa023521m	CYP79A	7	-	313	E	short N	C	
17655051	ppa017888m		34	-	0	F	194aa	F	
17655150	ppa004464m	CYP82C	1	-	211	U	extra I?	U	extra I?



17655171	ppa018666m	CYP71D	4	-	84	E	short N	C	
17655251	ppa017849m		4	-	0	F	398aa	F	
17655499	ppa023262m		1	-	0	F	237aa	F	
17655679	ppa004343m	CYP71B	1	-	123	C		C	
17655766	ppa018902m		6	+	0	F	72aa	F	
17655807	ppa024660m	CYP734A	1	+	374	C		C	
17655862	ppa005680m	CYP722A	7	-	3	E	short N	C	
17655902	ppa020227m	CYP86A	6	-	418	E	extended N	C	
17655981	ppb022807m		1	+	0	F	255aa	F	
17656111	ppa005937m	CYP88A	2	-	16	E	short N	C	
17656126	ppa004319m	CYP734A	1	-	374	C		C	
17656205	ppa003701m	CYP97C	7	+	406	C		C	
17656241	ppa005190m	CYP71A	4	+	106	E	extra I	C	
17656265	ppa017252m	CYP94B	5	+	442	E	short C	C	
17656343	ppa021443m		8	+	0	F	392aa	F	
17656469	ppa018047m		7	+	0	F	154aa	F	
17656503	ppa019849m	CYP706A	5	+	200	C		E	short N
17656657	ppa020167m		5	+	0	F	110aa	F	
17656672	ppa026438m	CYP92A	7	+	173	C		C	
17656771	ppa004331m	CYP86B	1	-	424	E	short N	C	
17656776	ppa020463m	CYP71D	1	-	78	E	short N	C	
17656959	ppa004635m	CYP81E	6	+	255	C		C	
17657040	ppa020002m	CYP71A	5	-	121	C		C	
17657044	ppa019660m	CYP706A	5	+	194	C		C	
17657054	ppa021108m	CYP72X	7	-	363	E	wrong 5'end of E4	C	
17657067	ppa025166m	CYP94C	7	+	438	E	short N	C	
17657069	ppa004266m	CYP714A	6	-	401	E	short N	C	
17657151	ppa003455m	CYP97A	6	-	409	E	lack E; extra I	C	
17657235	ppa004406m	CYP98A	1	+	163	C		C	
17657264	ppa005918m	CYP82C	1	-	215	E	short N	C	
17657289	ppa004646m	CYP734A	1	-	374	E	long D	c	FS
17657351	ppa004565m	CYP90B	7	+	46	C		c	8aa short N
17657563	ppa019215m	CYP92A	7	-	173	C		C	
17657572	ppa004474m	CYP98A	1	+	163	C		C	
17657585	ppa017288m		7	+	0	F	91aa	F	
17657682	ppa1027185m	CYP711A	1	-	329	C		C	
17657947	ppa1027205m	CYP714P	7	+	399	F	many defects	F	many defects
17657952	ppa014661m		4	-	0	F	211aa	F	
17657992	ppa007545m		8	+	0	F	364aa	F	
17658323	ppa004179m	CYP84A	1	-	211	C		C	
17658392	ppa020637m	CYP93A	7	+	225	C		C	
17658399	ppa016050m	CYP82G	8	-	222	E	short N	C	
17658496	ppa019666m	CYP87A	5	+	55	C		C	
17658543	ppa023454m	CYP724A	3	+	43	E	many defects	E	intron position
17658574	ppa023562m		7	+	0	F		227	F
17658874			1	-	0	F	84aa	F	
17659036	ppa016530m		4	+	0	F	194aa	F	
17659037	ppa004311m	CYP94B	3	-	442	C		C	
17659053	ppa016601m		5	+	374	F		F	many defects
17659061	ppa017401m	CYP706A	5	+	194	C		C	
17659069	ppa025750m	CYP93B	6	+	232	C		C	
17659173	ppa024556m	CYP71D	4	-	84	c	7aa short N	C	
17659209	ppa019787m	CYP711	1	-	329	C		C	
17659229	ppa016770m	CYP72A	4	+	351	E	extra I	C	
17659467	ppa026558m	CYP88A	2	+	16	E	extra E	E	extra E near C
17659547	ppa025126m	CYP71A	4	+	106	E	extra I x 2	C	
17659643	ppa015701m	CYP714A	2	+	399	c	4aa short N	C	
17659755	ppa018530m	CYP714A	2	+	399	C		C	
17659866	ppa014572m	CYP92A	4	-	188	C		C	
17659957	ppa023488m	CYP725A	4	-	21	C		C	
17660198	ppa004449m	CYP94A	8	-	447	C		C	
17660318	ppa019965m	CYP81E	6	+	255	C		C	
17660710	ppa020499m		7	+	0	F	361aa	F	
17660794	ppa004910m	CYP88A	2	+	16	C		C	
17660878	ppa017951m		4	+	0	F	318aa	F	
17661119	ppa025196m	CYP735A	1	+	374	C		C	
17661131	ppa020113m		2	-	0	F	141aa	F	
17661246	ppa004083m	CYP78A	5	+	272	C		C	
17661320	ppa004539m	CYP721	1	+	385	C		C	
17661453	ppa008535m		5	+	0	F	328aa	F	
17661551	ppa004268m	CYP714A	2	-	396	C		C	
17661757	ppa004281m	CYP706A	5	+	194	C		C	
17661806	ppa016042m		1	-	0	F	287aa	F	
17662015	ppa021901m		1	+	374	P	long D	P	long D
17662021	ppa026628m	CYP92A	4	-	188	C		C	

17662158	ppa004341m	CYP714A	6	-	400	C		C
17662207	ppa021147m	CYP76F	1	+	149	E	short N	C
17662274	ppa016912m	CYP82C	1	-	215	E	short N	C
17662330	ppa024670m	CYP71A	5	-	121	C		C
17662402	ppa005870m	CYP71D	1	-	78	E	short N	C
17662502	ppa024825m		5	+	0	F	397aa	F
17662527	ppa025974m		2	-	0	F	315a	F
17662779	ppa014596m	CYP92A	7	-	173	E	extra I	c FS
17662905			6	-	0	F	117aa	F
17662935	ppa003468m	CYP727A	2	+	469	C		C
17662955	ppa016466m	CYP82G	8	-	62	E	wrong 5'end of E4	C
17663193	ppa024661m	CYP92A	7	+	225	C		C
17663261	ppa024029m	CYP715A	2	+	394	E	short N	C
17663347	ppa025296m	CYP81E	6	+	255	C		C
17663349	ppa022979m	CYP76G	7	-	144	C		C
17663536	ppa015174m		1	+	0	F	153aa	F
17663546	ppa004768m	CYP90C	7	+	51	c	short N 2aa	C
17663708	ppa004476m	CYP704A	2	+	461	C		C
17663771	ppa023168m	CYP707A	8	-	1	E	short N	C
17663967	ppa023035m		2	+	0	F	194aa	F
17664051	ppa016261m	CYP72A	4	+	364	E	many defects	U
17664163	ppa027023m	CYP88A	2	+	16	C		C
17664171	ppa016800m	CYP734A	1	-	374	E	short N	C
17664453	ppa023335m	CYP92A	7	+	173	C		C
17664458			1	+	0	F	207aa	F
17664495	ppa004152m	CYP71A	5	+	119	C		C
17664572	ppa017619m	CYP93B	6	-	232	C		C
17664580	ppa017339m	CYP71A	5	-	119	C		C
17664597	ppa025083m	CYP71A	4	+	106	E	extra I	c FS
17664651	ppa021548m		6	+	0	F	209aa	F
17664725	ppa015645m		1	+	0	F	181aa	F
17664728	ppa004149m	CYP714A	2	+	399	C		C
17664929	ppa026707m		6	+	0	F	242aa	F
17664985	ppa023213m	CYP76A	7	-	142	E	extra I x 2	c FS
17665004	ppa006307m	CYP72A	4	+	351	E	missing E	C
17665119	ppa026605m	CYP79A	7	-	313	E	short N	C
17665137	ppa026417m		1	+	0	F	92aa	F
17665290	ppa004298m		1	-	453	E	short N; extra C	C
17665457			6	-	0	F	68aa	F
17665472	ppa005060m	CYP90A	2	+	47	C		C
17665595	ppa024077m	CYP71A	4	+	106	E	extra I	c FS
17665598	ppa022174m	CYP82A	1	-	211	C		C
17665760	ppa022752m	CYP82A	1	-	374	E	short N	C
17665784	ppa026638m		1	+	0	F	254aa	F
17665907	ppa020783m		1	-	0	F	334aa	F
17665942	ppa017987m	CYP81E	6	+	255	E	extra I; short C	C
17665951	ppa020957m	CYP724A	3	-	43	C		C
17666006	ppa025192m		1	-	0	F	70a	F
17666016	ppa026390m		4	-	0	F	373aa	F
17666021	ppa025696m	CYP71D	4	-	71	E	short C	c FS
17666096	ppa004301m	CYP82C	8	+	223	C		C
17666272	ppa017479m	CYP71D	4	-	71	E	many defects	C
17666294	ppa021021m		1	+	0	F	239aa	F
17666318		AGE	5	-	0	X	423aa	X
17666877	ppa004901m	CYP88A	2	-	16	C		C
17666896	ppa019933m	CYP86C	1	+	425	C		C
17666907	ppa004517m	CYP99A	1	+	149	C		C
17667063	ppa019731m	CYP82C	6	-	214	E	short N	C
17667246	ppa026871m	CYP78A	1	+	272	C		C
17667258	ppa026692m	CYP81E	6	+	255	E	extra I	C
17667471	ppa022621m	CYP374A	1	+	374	c	8aa short N	C
17667486	ppa016799m		5	-	0	F	192aa	F
17667725	ppa016144m	CYP98A	5	+	167	C		C
17667852	ppa025066m	CYP71D	4	-	71	C		C
17668013	ppa004984m		4	+	0	U	100N	U
17668213	ppa004436m	CYP92A	3	+	174	C		C
17668232	ppa023786m	CYP81E	6	+	255	C		C
17668327	ppa019549m		5	+	0	F	289aa	F
17668446	ppa004495m	CYP704A	2	-	461	C		C
17668474	ppa004433m	CYP75B	5	-	161	C		C
17668526	ppa002142m	reductase	1	+	477	X		X
17668529	ppa004463m	CYP72B1	1	+	374	C		C
17668564	ppa004579m	CYP704A	2	+	456	C		C
17668595	ppa021318m		6	+	0	F	400aa	F
17668713	ppa004473m	CYP98A	1	+	163	C		C

17668998	ppa017753m	CYP718	3	+	42	E	short N	C
17669024	ppa003868m	CYP78A	8	+	269	C		C
17669152	ppa022041m	CYP92A	6	-	188	C		C
17669173	ppa004377m	CYP71A	5	+	186	E	extra I	C
17669299	ppa003821m	CYP51	1	+	323	E	extra N	C
17669344	ppa016810m	CYP703A	2	-	320	E	short N	C

		Peach Phytozome		Peach Refgs	
Correct	C	136	C	200	
Nearly good	c	6	c	14	
Uncertain	U	2	U	3	
Error	E	78	E	5	
Pseudogene	P	5	P	5	
Filtered	F	73	F	73	
Non P450	X	3	X	3	
	Total	303		303	

reductase      Cytochrome P450 reductase  
AGE              l-Ala-D/L-Glu epimerase-like

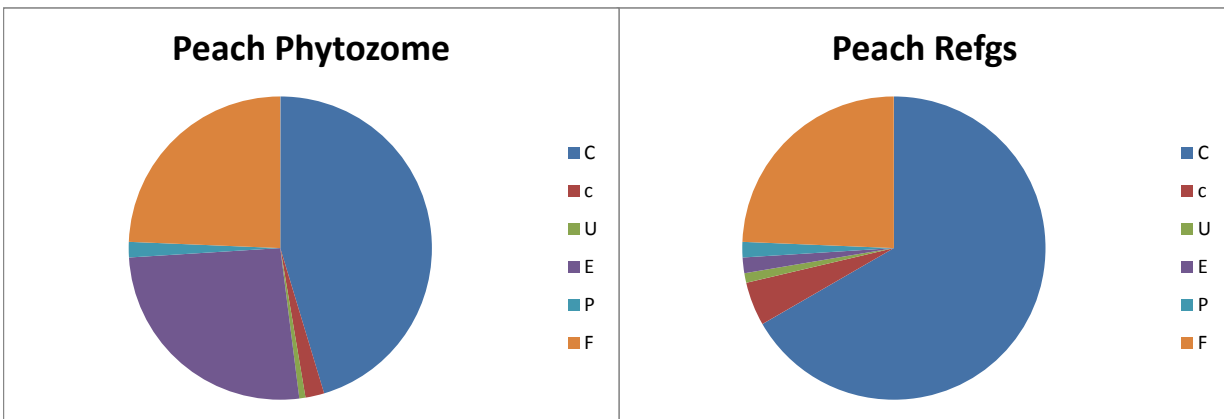


Table S2B Manual Assessment of Maize P450 Genes

KOG-PID	Subfamily	Chrom	Strand	Cluster	Phytozome	Comment	Refgs	Comment
20861891	CYP709B	1	+	391	C		C	
20862038	CYP071xn	1	+	99	P	short C	P	extra E
20862133	CYP078a	1	+	279	C		C	
20862210	CYP081b	1	+	267	C		C	
20862211	CYP081e	1	+	0	F		F	
20862212	CYP081e	1	+	0	F		F	
20862316	CYP076f	1	+	0	F		F	
20862635	CYP092a	1	+	180	E	short C	c	FS
20862842	CYP97C	1	+	406	E	truncated	C	
20862843	CYP97C	1	+	0	F		F	
20863960	CYP709B	1	+	392	C		C	
20864334	CYP085a	1	+	52	C		C	
20864806	CYP081b	1	+	267	C		C	
20864817	CYP081b	1	+	267	C		C	
20865126	CYP071j	1	+	92	C		C	
20865138	CYP078a	1	+	269	C		c	2aa shor N
20865139	CYP078a	1	+	0	F		F	
20865679	CYP87A	1	+	0	F		F	
20866187	CYP709B	1	+	392	C		C	
20866772	CYP706a	1	+	197	C		C	
20867226	CYP071j	1	+	90	C		C	
20868683	CYP084a	1	+	185	C		C	
20868809	CYP20D	1	+	436	C		C	
20868976	CYP099a	1	+	191	C		C	
20868977	CYP099a	1	+	0	F		F	
20869162	CYP86B	1	+	424	C		C	
20869439	CYP092a	1	+	180	C		C	
20869610	CYP081b	1	+	267	C		C	
20869665	CYP94D	1	+	451	C		C	
20869793	CYP081b	1	+	267	C		C	
20869898	CYP074a	1	+	467	C		C	
20869899	CYP074a	1	+	0	F		F	
20871007	CYP071e	1	+	132	C		C	
20861868	CYP86A	1	-	0	F		F	
20862296	CYP074a	1	-	467	C		C	
20862565	CYP076f	1	-	172	E	short C	c	FS
20863233	CYP081b	1	-	268	E	extra I	C	
20863430	CYP704B	1	-	453	C		C	
20863749	CYP071x	1	-	96	C		C	
20863837	CYP074a	1	-	467	C		C	
20864094	CYP714A	1	-	397	C		C	
20864338	CYP090b	1	-	46	C		c	4aa short N
20864339	CYP090b	1	-	0	F		F	
20864340	CYP090b	1	-	0	F		F	
20864341	CYP090b	1	-	0	F		F	
20865193	CYP89A	1	-	300	c	long N	c	short N
20865194	CYP89A	1	-	0	F		F	
20865195	CYP89A	1	-	0	F		F	
20865850	CYP20D	1	-	436	C		C	
20866364	CYP071x	1	-	96	C		C	
20866385	CYP94D	1	-	451	C		C	
20866403	CYP088a	1	-	66	C		C	
20866578	CYP078a	1	-	281	C		C	
20866622	CYP081b	1	-	0	F		F	
20867075	CYP96A	1	-	0	F		F	
20867248	CYP076f	1	-	158	C		C	
20867287	CYP085a	1	-	52	P	too long	P	too short
20867289	CYP081b	1	-	267	C		C	
20867576	CYP078a	1	-	273	C		C	
20867577	CYP078a	1	-	0	F		F	
20867578	CYP078a	1	-	0	F		F	
20867950	CYP704A	1	-	460	C		C	
20868491	CYP079a	1	-	318	C		E	I1 position
20869229	CYP707A	1	-	0	F		F	
20869734	CYP081b	1	-	268	C		C	
20869762	CYP709B	1	-	0	F		F	
20869831	CYP707a	1	-	1	C		C	
20869832	CYP707a	1	-	0	F		F	
20871474	CYP071xn	1	-	92	C		C	
20871476	CYP89A	1	-	0	F		F	
20841659	CYP714A	2	+	397	C		C	
20841660	CYP714A	2	+	0	F		F	
20841661	CYP714A	2	+	0	F		F	
20841662	CYP714A	2	+	0	F		F	
20841738	CYP727a	2	+	469	C		C	
20841754	CYP092a	2	+	175	C		C	
20842664	CYP071c	2	+	102	C		C	
20843216	CYP051a	2	+	327	C		C	
20843217	CYP051a	2	+	0	F		F	

20843487	reductase	2	+	475	C		C	
20843488	CYP102a	2	+	0	F		F	
20843759	CYP092a	2	+	182	C		E	short N, short C
20843948	CYP071a	2	+	121	C		E	extra E
20844027	CYP071a	2	+	98	C		C	
20844765	CYP090a	2	+	48	C		C	
20845128	CYP071j	2	+	88	C		c	5aa short N
20845355	CYP725a	2	+	22	C		C	
20846847	CYP071a	2	+	98	C		C	
20846848	CYP071a	2	+	0	F		F	
20846998	CYP86A	2	+	422	E	extra N	C	
20846999	CYP86A	2	+	0	F		F	
20847000	CYP86A	2	+	0	F		F	
20847595	CYP704A	2	+	459	C		C	
20848671	CYP709B	2	+	392	C		C	
20842668	CYP092a	2	-	180	c	long N	c	short N
20842772	CYP078a	2	-	279	C		C	
20843195	CYP94B	2	-	446	c	long N	c	short N
20843196	CYP94B	2	-	0	F		F	
20843229	CYP89A	2	-	306	C		C	
20843559	CYP081b	2	-	267	C		C	
20843807	CYP092a	2	-	180	U	short C	U	E2?
20844064	CYP092a	2	-	0	F		F	
20845006	CYP89A	2	-	0	F		F	
20845470	CYP89A	2	-	0	F		F	
20845572	CYP098a	2	-	0	F		F	
20845605	CYP724A	2	-	43	C		c	4aa short N
20845632	CYP709B	2	-	392	C		C	
20846126	CYP092a	2	-	180	C		C	
20846478	CYP071xn	2	-	0	F		F	
20846789	CYP071xn	2	-	99	E	too long	C	
20846790	CYP071xn	2	-	0	F		F	
20847212	CYP071xn	2	-	99	c	long N	c	short N
20847225	CYP707a	2	-	12	E	long E3	C	
20847632	CYP77A	2	-	285	c	long N	c	short N
20848411	CYP071xn	2	-	99	C		C	
20849062	CYP071xn	2	-	94	C		C	
20825119	CYP89A	3	+	0	F		F	
20825320	CYP89A	3	+	0	F		F	
20826380	CYP706a	3	+	197	C	short N	C	
20826447	CYP098a	3	+	164	C		C	
20826448	CYP098a	3	+	0	F		F	
20826449	CYP098a	3	+	0	F		F	
20826450	CYP098a	3	+	0	F		F	
20826451	CYP098a	3	+	0	F		F	
20826839	CYP89A	3	+	305	C		C	
20827143	CYP005a	3	+	331	E	short N	C	
20828808	CYP734A	3	+	383	C		C	
20828809	CYP734A	3	+	0	F		F	
20830181	CYP072x	3	+	357	C		C	
20830182	CYP072x	3	+	0	F		F	
20830183	CYP072x	3	+	0	F		F	
20830970	CYP094a	3	+	452	C		C	
20831245	CYP051a	3	+	323	C		C	
20831246	CYP051a	3	+	0	F		F	
20831357	CYP072x	3	+	0	F		F	
20831429	CYP003a	3	+	0	F		F	
20831431	CYP710A	3	+	470	C		E	short N
20831571	AGE	3	+	473	X		X	
20831572	CYP513F	3	+	0	F		F	
20825778	CYP051a	3	-	327	c	long N	c	short N
20826398	CYP709B	3	-	393	C		C	
20826581	CYP072x	3	-	357	C		C	
20826582	CYP072x	3	-	0	F		F	
20828298	CYP072x	3	-	0	F		F	
20829114	CYP072x	3	-	360	C		C	
20829155	CYP071j	3	-	90	E	exon 1, short C	C	
20829156	CYP071j	3	-	0	F		F	
20829812	CYP94C	3	-	441	C		C	
20830676	CYP086a	3	-	418	C		E	short C
20831103	CYP071a	3	-	97	C		C	
20831331	CYP90D	3	-	50	C		C	
20831332	CYP90D	3	-	0	F		F	
20831483	CYP072x	3	-	359	C		C	
20831484	CYP072x	3	-	0	F		F	
20831551	CYP072x	3	-	360	C		C	
20831552	CYP072x	3	-	0	F		F	
20855236	CYP714A	4	+	0	F		F	
20856296	CYP071j	4	+	90	C		C	
20856392	CYP716A	4	+	23	C		C	
20856684	CYP071j	4	+	94	C		C	
20857681	CYP092a	4	+	178	c	long N	c	short N

20858029	CYP89A	4	+	307	C		C	
20858857	CYP051a	4	+	324	C		C	
20858993	CYP071c	4	+	101	c	long N	c	short N
20858994	CYP071c	4	+	0	F		F	
20859035	CYP005a	4	+	332	U	E3	U	E3
20859036	CYP6AG	4	+	0	F		F	
20859704	CYP707a	4	+	6	C		C	
20859705	CYP707a	4	+	0	F		F	
20859921	CYP071c	4	+	103	C		C	
20859964	CYP97C	4	+	0	F		F	
20860740	reductase	4	+	482	X		X	
20860984	CYP89A	4	+	303	C		C	
20861088	reductase	4	+	475	C		C	
20861311	CYP081b	4	+	267	c	long N	c	short N
20854891	CYP090a	4	-	48	C		C	
20854892	CYP090a	4	-	0	F		F	
20854893	CYP090a	4	-	0	F		F	
20854894	CYP090a	4	-	0	F		F	
20855588	CYP078a	4	-	279	C		C	
20855748	CYP715A	4	-	394	C		C	
20856144	CYP75B	4	-	162	E	many E	C	
20856145	CYP075b	4	-	0	F		F	
20856439	CYP20D	4	-	436	C		C	
20857860	CYP071c	4	-	103	C		C	
20858061	CYP071c	4	-	103	E	extra E	C	
20858062	CYP071c	4	-	0	F		F	
20858063	CYP071c	4	-	0	F		F	
20858064	CYP071c	4	-	0	F		F	
20858065	CYP071c	4	-	0	F		F	
20858123	CYP074a	4	-	467	C		C	
20858525	CYP071j	4	-	88	C		C	
20858526	CYP071j	4	-	0	F		F	
20858877	CYP86C	4	-	425	C		E	extra E
20858878	CYP86C	4	-	0	F		F	
20858957	CYP94B	4	-	446	C		C	
20859127	CYP071a	4	-	243	C		E	I1 position, extra intron
20859586	CYP071j	4	-	94	E	short N	C	
20860022	CYP099a	4	-	191	C		C	
20860249	CYP099a	4	-	191	C		C	
20860251	CYP075b	4	-	162	C		C	
20860448	CYP89A	4	-	307	c	long N	c	short N
20860477	CYP707a	4	-	14	C		E	extra I
20860478	CYP707a	4	-	0	F		F	
20860886	CYP735A	4	-	388	E	missing E1	C	
20860938	CYP097b	4	-	412	C		C	
20860939	CYP097b	4	-	0	F		F	
20877138	CYP071d	5	+	93	C		C	
20877773	CYP071j	5	+	88	E	short C	c	FS
20877774	CYP071j	5	+	0	F		F	
20878227	CYP734A	5	+	383	E	retained I	C	
20878266	CYP073a	5	+	207	c	long N	c	short N
20878439	CYP87A	5	+	56	C		E	extra NE
20879413	CYP94B	5	+	0	F		F	
20879434	CYP079a	5	+	318	C		C	
20880195	CYP97C	5	+	0	F		F	
20880786	CYP084a	5	+	185	C		C	
20880856	CYP071j	5	+	88	C		C	
20881054	CYP076f	5	+	158	C		C	
20881436	CYP87A	5	+	63	C		C	
20881481	CYP071j	5	+	91	C		C	
20881482	CYP071j	5	+	0	F		F	
20881975	CYP86B	5	+	424	C		c	4aa short N
20882219	CYP77B	5	+	286	C		C	
20882339	CYP87A	5	+	0	F		F	
20882386	CYP074a	5	+	467	C		C	
20876354	CYP071d	5	-	93	C		C	
20876475	CYP071j	5	-	92	c	long N	c	short N
20877274	CYP89A	5	-	300	C		C	
20877539	CYP86A	5	-	422	C		C	
20878287	CYP725a	5	-	24	C		C	
20878711	CYP081b	5	-	267	C		C	
20878781	CYP075b	5	-	162	C		C	
20879184	CYP081b	5	-	267	C		C	
20879876	CYP071j	5	-	91	E	short N	C	
20879960	CYP97A	5	-	410	C		C	
20881730	CYP89A	5	-	305	E	short N	C	
20881918	CYP081b	5	-	267	C		C	
20882387	CYP093a	5	-	233	E	short C	C	
20882764	CYP707a	5	-	6	C		C	
20882765	CYP707a	5	-	0	F		F	
20883328	CYP079a	5	-	318	C		C	
20820934	CYP94C	6	+	441	C		C	

20821377	CYP071xn	6	+	100	C	C	
20821686	CYP094a	6	+	452	C	C	
20821801	CYP89A	6	+	307	C	c	6aa short N
20822852	CYP098a	6	+	164	C	C	
20823436	CYP071xn	6	+	100	C	E	extra last intron
20823568	CYP073a	6	+	207	C	C	
20824162	CYP20D	6	+	466	C	C	
20824284	CYP714A	6	+	0	F	F	
20820309	CYP071j	6	-	89	C	C	
20820629	CYP709B	6	-	392	C	C	
20820922	CYP004a	6	-	0	F	F	
20822302	CYP704A	6	-	464	C	C	
20822813	CYP90D	6	-	50	C	C	
20823056	CYP071j	6	-	88	C	C	
20823861	CYP709B	6	-	392	C	E	extra last intron
20832176	CYP071a	7	+	98	C	C	
20832510	CYP709B	7	+	0	F	F	
20832598	CYP709B	7	+	392	C	C	
20833544	reductase	7	+	475	C	C	
20834344	CYP078a	7	+	273	C	C	
20835393	CYP97A	7	+	0	F	F	
20836509	CYP092a	7	+	175	C	C	
20831976	CYP734A	7	-	384	C	C	
20832042	CYP725a	7	-	22	C	C	
20833130	CYP707a	7	-	12	C	C	
20833131	CYP707a	7	-	0	F	F	
20833132	CYP707a	7	-	0	F	F	
20833532	CYP735A	7	-	388	C	C	
20833533	CYP735A	7	-	0	F	F	
20833602	CYP076f	7	-	170	C	C	
20834139	CYP092a	7	-	182	C	C	
20834884	CYP081b	7	-	267	C	C	
20835484	CYP076f	7	-	172	E	c	lack E1 N end
20849347	CYP071x	8	+	0	F	F	
20849732	CYP704A	8	+	459	E	C	short N
20850107	CYP071a	8	+	97	C	C	
20850684	CYP071a	8	+	97	C	C	
20850910	CYP071a	8	+	97	C	C	
20851408	CYP072x	8	+	0	F	F	
20851488	CYP082a	8	+	346	C	C	
20851541	CYP96A	8	+	0	F	F	
20851717	CYP071a	8	+	0	F	F	
20851920	CYP94C	8	+	441	C	C	
20852050	CYP071a	8	+	97	C	C	
20852951	CYP072x	8	+	359	C	C	
20853056	CYP722A	8	+	2	U	U	
20853057	CYP722A	8	+	0	F	F	
20853070	CYP072x	8	+	358	C	C	
20853283	CYP073a	8	+	207	C	C	
20853311	CYP20D	8	+	436	C	C	
20853312	CYP96A	8	+	0	F	F	
20853386	CYP86B	8	+	0	F	F	
20853732	CYP072x	8	+	358	C	C	
20853746	CYP075b	8	+	162	C	C	
20849226	CYP081b	8	-	267	C	C	
20849227	CYP081b	8	-	0	F	F	
20849588	CYP86C	8	-	0	F	F	
20849901	CYP709B	8	-	392	C	C	
20850447	AGE	8	-	473	X	X	
20850987	CYP051a	8	-	327	C	C	
20851000	CYP89A	8	-	303	C	C	
20851164	CYP072x	8	-	357	E	C	extra E
20851165	CYP072x	8	-	0	F	F	
20851166	CYP072x	8	-	0	F	F	
20851811	CYP073a	8	-	207	C	C	
20851954	CYP072x	8	-	359	C	C	
20852021	CYP086a	8	-	418	C	E	short C
20836969	CYP20D	9	+	436	C	C	
20837064	CYP088a	9	+	17	C	c	5aa short N
20837272	CYP093a	9	+	233	C	C	
20837471	CYP704A	9	+	0	F	F	
20837538	CYP071x	9	+	0	F	F	
20839040	CYP075a	9	+	0	F	F	
20839283	CYP734A	9	+	383	C	C	
20840262	CYP704A	9	+	0	F	F	
20840282	CYP088a	9	+	17	C	C	
20840639	CYP075a	9	+	0	F	F	
20840694	CYP078a	9	+	0	F	F	
20841029	CYP099a	9	+	0	F	F	
20837150	CYP071j	9	-	89	C	C	
20837265	CYP701a	9	-	312	C	C	
20837344	CYP709B	9	-	392	C	E	E1-4

20837345	CYP709B	9	-	0	F	F	
20837734	CYP701a	9	-	312	C	C	
20837735	CYP701a	9	-	0	F	F	
20837966	CYP071x	9	-	96	C	E	I1 3aa shift
20838041	CYP709B	9	-	391	C	C	
20838065	CYP5A	9	-	330	C	E	short N
20838066	CYP005a	9	-	0	F	F	
20838272	CYP078a	9	-	273	U	U	
20838345	CYP709B	9	-	0	F	F	
20838611	CYP074a	9	-	467	C	C	
20838695	CYP079a	9	-	316	C	C	
20838913	CYP94D	9	-	451	C	C	
20839039	CYP072x	9	-	0	F	F	
20839201	CYP734A	9	-	383	C	C	
20839485	CYP093a	9	-	230	C	C	
20841282	CYP071x	9	-	96	C	C	
20871964	CYP093a	10	+	233	C	C	
20872325	CYP89A	10	+	0	F	F	
20872448	CYP94C	10	+	441	C	C	
20872840	reductase	10	+	475	X	X	
20873564	CYP87A	10	+	56	C	C	
20875139	reductase	10	+	475	X	X	
20875140	reductase	10	+	0	F	X	
20875319	CYP071c	10	+	100	E	C	missing E
20871820	CYP704A	10	-	459	E	C	retained I
20871821	CYP704A	10	-	0	F	F	
20872629	CYP085a	10	-	0	F	F	
20872630	CYP085a	10	-	0	F	F	
20872654	CYP89A	10	-	306	C	C	
20872699	CYP071a	10	-	243	E	C	ejj shift
20872934	CYP703a	10	-	320	C	C	
20872935	CYP703a	10	-	0	F	F	
20873412	CYP20D	10	-	436	C	C	
20873414	CYP89A	10	-	306	C	C	
20873658	CYP715A	10	-	0	F	F	
20873762	CYP092a	10	-	0	F	F	
20873927	CYP87A	10	-	56	C	C	
20874203	CYP071c	10	-	100	C	C	
20874476	CYP94C	10	-	441	C	C	
20874831	CYP051a	10	-	323	c	c	long N
20874832	CYP051a	10	-	0	F	F	short N
20875179	CYP099a	10	-	191	C	C	
20875371	CYP093a	10	-	233	E	C	missing E

	Maize Phytozome		Maize Refgs	
Correct	C	201	Correct	200
Nearly good	c	13	Nearly good	24
Uncertain	U	4	Uncertain	4
Error	E	25	Error	15
Pseudogene	P	2	Pseudoger	2
Filtered	F	118	Filtered	118
Non P450	X	5	Non P450	5
	Total	368		368

reductase Cytochrome P450 reductase  
AGE I-Ala-D/L-Glu epimerase-like

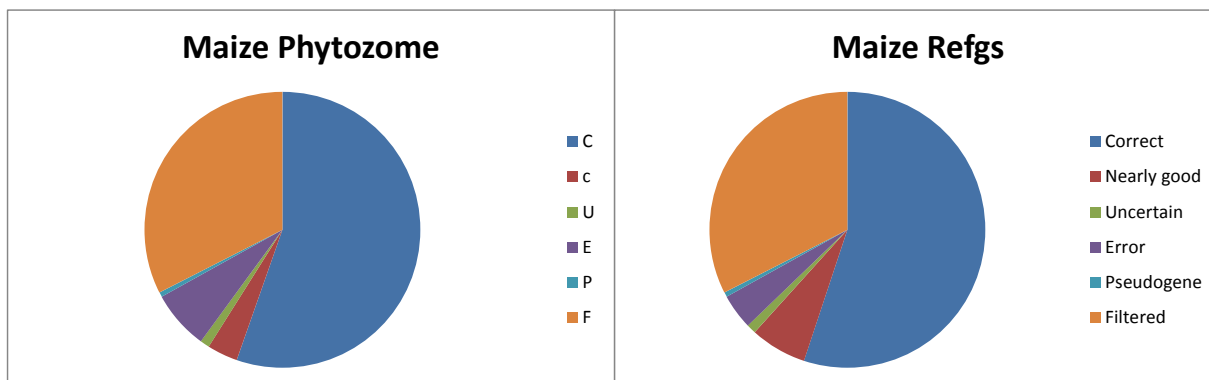




Table S3. Resources of Sequences and Annotations.

SpecCode	Species	Genome/Aa/GFF	EST/cDNA
aquicoer	<a href="#">Aquilegia coerulea</a>	Phytozome	PlantGDB, UniGene
arablyra	<a href="#">Arabidopsis lyrata</a> *	Phytozome	JGI
arabthal	<a href="#">Arabidopsis thaliana</a>	Phytozome	PlantGDB, UniGene
astespec	<a href="#">Asterochloris spec Cgr/DA1pho</a>	JGI	JGI
bracdist	<a href="#">Brachypodium distachyon</a> *	Phytozome	PlantGDB, UniGene
brasrapa	<a href="#">Brassica rapa</a>	Phytozome	PlantGDB
comesine	<a href="#">Camellia sinensis</a>	Phytozome	PlantGDB, GenBank
capsrube	<a href="#">Capsella rubella</a>	Phytozome	PlantGDB
caripapa	<a href="#">Carica papaya</a> *	Phytozome	PlantGDB, GenBank
chlarein	<a href="#">Chlamydomonas reinhardtii</a> *	Phytozome	PlantGDB, UniGene
chlovari	<a href="#">Chlorella variabilis NC64A</a>	JGI	JGI
chlovulg	<a href="#">Chlorella vulgaris</a>	JGI	JGI
citrclem	<a href="#">Citrus clementina</a>	Phytozome	PlantGDB, UniGene
coccsube	<a href="#">Coccomyxa subellipsoidea</a>	Phytozome	PlantGDB
cucusati	<a href="#">Cucumis sativus</a>	Phytozome	PlantGDB, GenBank
eucagran	<a href="#">Eucalyptus grandis</a>	Phytozome	PlantGDB, GenBank
fragvesc	<a href="#">Fragaria vesca</a>	Phytozome	PlantGDB, GenBank
glycmax_	<a href="#">Glycine max</a> *	Phytozome	PlantGDB, UniGene
gossraim	<a href="#">Gossypium raimondii</a>	Phytozome	PlantGDB, UniGene
jatrcurc	<a href="#">Jatropha curcas</a>	Kazusa	PlantGDB, GenBank
linuusit	<a href="#">Linum usitatissimum</a>	Phytozome	-
lotujapo	<a href="#">Lotus japonicus</a>	Kazusa	PlantGDB, UniGene
maniescu	<a href="#">Manihot esculenta</a>	Phytozome	PlantGDB, UniGene
meditrun	<a href="#">Medicago truncatula</a> *	Phytozome	PlantGDB, UniGene
micrpusi	<a href="#">Micromonas pusilla</a> *	Phytozome	JGI
micrrcc2	<a href="#">Micromonas rcc299</a> *	Phytozome	JGI, GenBank
mimugutt	<a href="#">Mimulus guttatus</a>	Phytozome	PlantGDB, UniGene
oryzsati	<a href="#">Oryza sativa</a> *	Phytozome	PlantGDB, UniGene
ostrluci	<a href="#">Ostreococcus lucimarinus</a> *	Phytozome	PlantGDB, GenBank
ostrcc8	<a href="#">Ostreococcus rcc809</a>	JGI	JGI
ostrtaur	<a href="#">Ostreococcus tauri</a> *	JGI	JGI
panivirg	<a href="#">Panicum virgatum</a>	Phytozome	-

phasvulg	<a href="#"><i>Phaseolus vulgaris</i></a>	Phytozome	PlantGDB, UniGene
physpate	<a href="#"><i>Physcomitrella patens</i></a> *	Phytozome	PlantGDB, UniGene
poputric	<a href="#"><i>Populus trichocarpa</i></a> *	Phytozome	PlantGDB, UniGene
prunpers	<a href="#"><i>Prunus persica</i></a>	Phytozome	PlantGDB, UniGene
ricicomm	<a href="#"><i>Ricinus communis</i></a> *	Phytozome	PlantGDB, UniGene
selamoel	<a href="#"><i>Selaginella moellendorffii</i></a> *	Phytozome	PlantGDB, UniGene
setaital	<a href="#"><i>Setaria italica</i></a>	Phytozome	-
solalyco	<a href="#"><i>Solanum lycopersicum</i></a> *	Phytozome	PlantGDB, UniGene
solatube	<a href="#"><i>Solanum tuberosum</i></a> *	Phytozome	PlantGDB, UniGene
sorgbico	<a href="#"><i>Sorghum bicolor</i></a>	Phytozome	PlantGDB, UniGene
thelhalo	<a href="#"><i>Thellungiella halophila</i></a>	Phytozome	PlantGDB, GenBank
theocaca	<a href="#"><i>Theobroma cacao</i></a>	Phytozome	PlantGDB, UniGene
vitivini	<a href="#"><i>Vitis vinifera</i></a> *	Phytozome	PlantGDB, UniGene
volvcart	<a href="#"><i>Volvox carteri</i></a> *	Phytozome	PlantGDB, UniGene
zea_mays	<a href="#"><i>Zea mays</i></a>	Phytozome	PlantGDB, UniGene

Resource	URL
Phytozome	<a href="http://www.phytozome.net/">http://www.phytozome.net/</a>
JGI	<a href="http://genome.jgi.doe.gov/">http://genome.jgi.doe.gov/</a>
Kazusa	<a href="http://www.kazusa.or.jp/e/index.html">http://www.kazusa.or.jp/e/index.html</a>
PlantGDB	<a href="http://www.plantgdb.org/">http://www.plantgdb.org/</a>
UniGene	<a href="http://www.ncbi.nlm.nih.gov/unigene">http://www.ncbi.nlm.nih.gov/unigene</a>
Genbank	<a href="http://www.ncbi.nlm.nih.gov/genbank/">http://www.ncbi.nlm.nih.gov/genbank/</a>