

Table S2: Identification of previously discovered CPuORFs

Homology group	Search Method	uORF	mORF	blastp	mORF homology	CDS annotation	Malvids	Purifying selection	>10 species
1	ATH-OSA	CPuORF1	AT2G18160	✓	✓	✓	✓	✓	✓
1	ATH-OSA	CPuORF2	AT4G34590	✓	✓	✓	✓	✓	✓
1	ATH-OSA	CPuORF3	AT3G62420	✓	✓	✓	✓	✓	✓
1	ATH-OSA	CPuORF4	AT5G49450	✓	✓	✓	✓	✓	✓
1	ATH-OSA	CPuORF5	AT1G75390	✓	✓	✓	✓	✓	✓
2	ATH-OSA	CPuORF6	AT2G27230	✓	✓	✓	✓	✓	✓
2	ATH-OSA	CPuORF7	AT2G31280	✓	✓	X	-	-	-
2	ATH-OSA	CPuORF8	AT1G06150	✓	✓	✓	✓	✓	✓
3	ATH-OSA	CPuORF9	AT3G02470	✓	✓	✓	✓	✓	✓
3	ATH-OSA	CPuORF10	AT5G15950	✓	✓	✓	✓	✓	✓
3	ATH-OSA	CPuORF11	AT3G25570	✓	✓	✓	✓	✓	✓
4	ATH-OSA	CPuORF12	AT4G25670	✓	✓	✓	✓	✓	✓
4	ATH-OSA	CPuORF13	AT4G25690	✓	✓	✓	✓	✓	✓
4	ATH-OSA	CPuORF14	AT5G52550	✓	✓	✓	✓	✓	✓
5	ATH-OSA	CPuORF15	AT5G61230	✓	✓	✓	✓	✓	✓
5	ATH-OSA	CPuORF16	AT5G07840	✓	✓	✓	✓	✓	✓
6	ATH-OSA	CPuORF17	AT2G43020	✓	✓	✓	✓	✓	✓
6	ATH-OSA	CPuORF18	AT3G59050	✓	✓	✓	✓	✓	✓
7	ATH-OSA	CPuORF19	AT1G36730	✓	✓	✓	✓	✓	✓
8	ATH-OSA	CPuORF20	AT3G12010	✓	✓	✓	✓	X	-
9	ATH-OSA	CPuORF21	AT5G09670	✓	✓	✓	✓	✓	✓
9	ATH-OSA	CPuORF22	AT5G64550	✓	✓	✓	✓	✓	✓
9	ATH-OSA	CPuORF23	AT1G64140	✓	✓	✓	✓	✓	✓
10	ATH-OSA	CPuORF24	AT5G45430	✓	✓	✓	✓	✓	✓
10	ATH-OSA	CPuORF25	AT4G19110	✓	✓	✓	✓	✓	✓
11	ATH-OSA	CPuORF26	AT4G12430	✓	✓	✓	✓	✓	✓
11	ATH-OSA	CPuORF27	AT4G22590	✓	✓	✓	✓	✓	✓
12	ATH-OSA	CPuORF28	AT1G70780	✓	✓	✓	✓	✓	✓
12	ATH-OSA	CPuORF29	AT1G23150	✓	✓	✓	✓	✓	✓
13	ATH-OSA	CPuORF30	AT3G18000	✓	✓	✓	✓	✓	✓
13	ATH-OSA	CPuORF31	AT1G48600	✓	✓	✓	✓	✓	✓
13	ATH-OSA	CPuORF32	AT1G73600	✓	✓	✓	X	-	-
14	ATH-OSA	CPuORF33	AT3G01470	✓	✓	✓	✓	✓	✓
15	ATH-OSA	CPuORF34	AT1G29950	✓	✓	✓	✓	✓	✓
15	ATH-OSA	CPuORF35	AT1G29950	✓	✓	✓	✓	✓	✓
15	ATH-OSA	CPuORF36	AT5G50010	✓	✓	✓	✓	✓	✓
15	ATH-OSA	CPuORF37	AT5G50010	✓	✓	✓	✓	✓	✓
15	ATH-OSA	CPuORF38	AT5G64340	✓	✓	✓	✓	✓	✓
15	ATH-OSA	CPuORF39	AT5G64340	✓	✓	✓	✓	✓	✓
15	ATH-OSA	CPuORF40	AT5G64340	✓	✓	✓	✓	✓	✓
15	ATH-OSA	CPuORF41	AT5G09460	✓	✓	✓	✓	✓	✓
15	ATH-OSA	CPuORF42	AT5G09460	✓	✓	✓	✓	✓	✓
15	ATH-OSA	CPuORF43	AT5G09460	✓	✓	✓	✓	✓	✓
16	ATH-OSA	CPuORF44	AT3G51630	✓	✓	✓	✓	✓	✓
17	ATH-OSA	CPuORF45	AT1G58120	✓	✓	✓	✓	✓	✓
17	ATH-OSA	CPuORF46	AT3G53400	✓	✓	✓	✓	✓	✓
17	ATH-OSA	CPuORF47	AT5G03190	✓	✓	X	-	-	-
17	ATH-OSA	CPuORF48	AT5G01710	✓	✓	✓	✓	✓	✓
18	ATH-OSA	CPuORF49	AT4G36990	✓	✓	✓	✓	✓	✓
19	ATH-OSA	CPuORF50	AT5G53590	✓	✓	✓	✓	✓	✓
20	ATH-ATH	CPuORF51	AT3G53670	✓	✓	✓	✓	✓	✓
20	ATH-ATH	CPuORF52	AT2G37480	✓	✓	✓	✓	X	-
21	ATH-ATH	CPuORF53	AT1G68550	✓	✓	✓	✓	X	-
21	ATH-ATH	CPuORF54	AT1G25470	✓	✓	✓	✓	X	-
22	ATH-ATH	CPuORF55	AT1G16860	✓	✓	✓	X	-	-
22	ATH-ATH	CPuORF56	AT1G78880	✓	✓	✓	✓	✓	X
23	ATH-ATH	CPuORF57	AT1G64630	✓	✓	✓	✓	✓	✓
23	ATH-ATH	CPuORF58	AT5G41990	✓	✓	✓	✓	X	-
24	ATH-ATH	CPuORF59	AT3G22970	✓	✓	✓	✓	✓	✓
24	ATH-ATH	CPuORF60	AT4G14620	✓	✓	✓	✓	✓	✓
25	ATH-ATH	CPuORF61	AT3G45240	✓	✓	✓	✓	✓	✓
25	ATH-ATH	CPuORF62	AT5G60550	✓	✓	✓	✓	✓	✓
26	ATH-ATH	CPuORF63	AT3G10910	✓	✓	✓	✓	✓	X
26	ATH-ATH	CPuORF64	AT5G05280	✓	✓	X	-	-	-
	BAIUCAS	Takahashi_1	AT1G30270	✓	✓	✓	✓	✓	✓
	BAIUCAS	Takahashi_2	AT1G67480	✓	✓	✓	✓	✓	✓
	BAIUCAS	Takahashi_3	AT2G11890	✓	✓	✓	✓	✓	✓
	BAIUCAS	Takahashi_4	AT2G22500	✓	✓	✓	✓	✓	✓
	BAIUCAS	Takahashi_5	AT2G42880	✓	✓	✓	✓	✓	✓
	BAIUCAS	Takahashi_6	AT3G15430	✓	✓	✓	✓	✓	✓
	BAIUCAS	Takahashi_7	AT4G10170	✓	✓	✓	✓	✓	✓
	BAIUCAS	Takahashi_8	AT4G12790	✓	✓	✓	✓	✓	✓
	BAIUCAS	Takahashi_9	AT4G30960	✓	✓	✓	✓	✓	✓
	BAIUCAS	Takahashi_10	AT5G02480	✓	✓	✓	✓	✓	X
	BAIUCAS	Takahashi_11	AT5G09330	✓	✓	✓	✓	✓	✓
	BAIUCAS	Takahashi_12	AT5G46590	✓	✓	✓	✓	✓	✓
	BAIUCAS	Takahashi_13	AT5G64060	✓	✓	✓	✓	✓	✓
	BAIUCAS	Takahashi_16	AT2G27350	✓	✓	✓	✓	✓	✓
	BAIUCAS	Takahashi_18	AT3G55050	✓	✓	✓	✓	✓	✓
	BAIUCAS	Takahashi_19	AT5G27920	✓	✓	✓	✓	✓	X
	BAIUCAS	Takahashi_20	AT5G60450	✓	✓	✓	✓	✓	✓
	BAIUCAS	Takahashi_21	AT5G63640	✓	✓	✓	✓	✓	✓
	MOTIF search	Vaughn_1	AT2G11890	✓	✓	✓	✓	✓	✓
	MOTIF search	Vaughn_2	AT2G22500	✓	✓	✓	✓	✓	✓
	MOTIF search	Vaughn_3	AT1G67480	✓	✓	✓	✓	✓	✓
	MOTIF search	Vaughn_4	AT4G30960	✓	✓	✓	✓	✓	✓
	Experimental	Laing_1	AT5G55120	✓	✓	✓	✓	✓	✓
	Experimental	Laing_2	AT4G26850	✓	✓	✓	✓	✓	✓