

1 **Appendix A** Characteristics of 187 RsMYBs identified in radish and their homologs in Arabidopsis.

Gene ID	Gene name	No of aa	MW	PI	instability index	GRAVY	chromosome location (5'-3')	Best Arabidopsis hit	Arabidopsis MYB	MYB GROUP
RSG10728.t1/Rs233600.1	RsMYB1	2012	228149.75	6.51	50.22	-0.65	159458 169253	AT3G18100	AtMYB4R1	Atypical MYB genes
RSG29867.t1/Rs294280.1	RsMYB2	493	55170.42	8.22	64.27	-0.966	101313 103465	AT5G02320	AtMYB3R5	R1R2R3
RSG40289.t1/Rs225360.1	RsMYB3	505	56413.8	8.46	58.16	-0.942	56603 58876	AT5G02320	AtMYB3R5	R1R2R3
RSG00515.t1/Rs045680.1	RsMYB4	874	97159.89	5.25	61.86	-0.772	301913 305991	AT4G32730	AtMYB3R1	R1R2R3
RSG44012.t1/Rs428790.1	RsMYB5	916	101400.99	5.28	55.46	-0.733	8671 12924	AT4G32730	AtMYB3R1	R1R2R3
RSG06448.t1/Rs152470.1	RsMYB6	936	103842.38	5.57	58.57	-0.768	179599 184042	AT4G32730	AtMYB3R1	R1R2R3
RSG03843.t1	RsMYB7	453	51051.34	7.17	73.2	-0.889	426640 428542	AT5G02320	AtMYB3R5	R1R2R3
RSG10971.t1	RsMYB8	1127	126454.43	5.7	53.57	-0.713	233095 239575	AT5G41020	AtMYB3R-like	MYB-1R (MYB-related gene)
RSG35192.t1/Rs053460.1	RsMYB9	767	86985.65	5.33	59.45	-0.895	30302 33212	AT3G18100	AtMYB4R1	Atypical MYB genes
RSG41658.t1/Rs064980.1	RsMYB10	197	22959.8	8.87	45.46	-1.053	27094 28282	AT5G14750	AtMYB66	R2R3
RSG10248.t1/Rs290380.1	RsMYB11	322	36638.85	6.04	50.17	-0.719	1101 2823	AT3G02940	AtMYB107	R2R3
RSG23281.t1/Rs041020.1	RsMYB12	327	35266.08	6.56	63.29	-0.684	154863 155846	AT2G23290	AtMYB70	R2R3
RSG01501.t1/Rs397770.1	RsMYB13	200	23265.2	8.85	8.85	-0.964	1040910 1042115	AT5G14750	AtMYB66	R2R3
RSG31594.t1/Rs067460.1	RsMYB14	338	38118.76	6.14	49.83	-0.598	68366 69557	AT5G10280	AtMYB92	R2R3
RSG13917.t1/Rs144280.1	RsMYB15	334	37851.48	6.2	59.55	-0.624	115157 116330	AT5G10280	AtMYB92	R2R3
RSG20912.t1/Rs18900.1	RsMYB16	233	26389.8	8.58	42.37	-0.652	7575 9415	AT5G40330	AtMYB23	R2R3
RSG15050.t1	RsMYB17	324	36923.37	5.95	49.09	-0.734	202612 204058	AT3G02940	AtMYB107	R2R3
RSG27407.t1/Rs219790.1	RsMYB18	312	35571.71	6.45	52.75	-0.783	27445 29729	AT3G02940	AtMYB107	R2R3
RSG39019.t1	RsMYB19	298	32814.85	7.73	70.41	-0.662	60238 61134	AT5G67300	AtMYB44	R2R3

RSG10184.t1/Rs420430.1	RsMYB20	283	31118.67	5.46	59.44	-0.636	66768	67689	AT4G37260	AtMYB73	R2R3
RSG14079.t1/Rs456260.1	RsMYB21	229	26690.04	9.59	53.15	-0.887	263083	264148	AT1G73410	AtMYB54	R2R3
RSG35382.t1/Rs333170.1	RsMYB22	275	31509.58	8.74	48.94	-0.843	1044	2054	AT2G36890	AtMYB38	R2R3
RSG17511.t1/Rs342130.1	RsMYB23	459	52013.06	9.22	71.64	-0.793	34362	35168	AT3G50060	AtMYB77	R2R3
RSG11822.t1/Rs492030.1	RsMYB24	182	21103.94	9.81	59.95	-0.773	233387	234599	AT3G27920	AtMYB0	R2R3
RSG01354.t1/Rs399360.1	RsMYB25	328	37781.89	5.72	51.63	-0.874	314701	316123	AT3G02940	AtMYB107	R2R3
RSG26906.t1/Rs394210.1	RsMYB26	337	37741.45	6.17	48.93	-0.534	120110	121293	AT5G10280	AtMYB92	R2R3
RSG34421.t1/Rs05770.1	RsMYB27	234	27031.32	9.25	49.62	-0.829	56111	57201	AT1G73410	AtMYB54	R2R3
RSG26031.t1/Rs137190.1	RsMYB28	240	27772.35	8.66	65.08	-0.834	230851	231776	AT3G46130	AtMYB48	R2R3
RSG18980.t1/Rs199790.1	RsMYB29	250	28962.17	5.43	49.22	-0.88	346911	348295	AT2G31180	AtMYB14	R2R3
RSG14215.t1/Rs173640.1	RsMYB30	263	30413.65	7.69	49.24	-1.024	15075	16613	AT3G30210	AtMYB121	R2R3
RSG23766.t1/Rs344380.1	RsMYB31	248	28844.48	9.05	58.19	-0.894	85662	86608	AT3G46130	AtMYB48	R2R3
RSG22891.t1/Rs278740.1	RsMYB32	275	31120.62	5.25	52.52	-0.797	196315	197452	AT3G23250	AtMYB15	R2R3
RSG30112.t1	RsMYB33	345	39672.39	6.01	47.94	-0.688	1040	2273	AT4G05100	AtMYB74	R2R3
RSG00270.t1/Rs060270.1	RsMYB34	288	32190.23	5.89	55.99	-0.552	313168	314354	AT4G28110	AtMYB41	R2R3
RSG22060.t1/Rs149760.1	RsMYB35	293	33016.75	8.63	48.36	-0.62	168800	169805	AT4G12350	AtMYB42	R2R3
RSG29153.t1/Rs133650.1	RsMYB36	319	35964.84	6.35	48.66	-0.785	107079	108787	AT5G54230	AtMYB49	R2R3
RSG28205.t1/Rs304490.1	RsMYB37	286	32069.69	5.33	50.84	-0.718	89492	90652	AT3G23250	AtMYB15	R2R3
RSG37948.t1/Rs350910.1	RsMYB38	305	33273.21	8.79	61.91	-0.641	40515	41432	AT5G67300	AtMYB44	R2R3
RSG34945.t1/Rs413390.1	RsMYB39	328	36926.39	5.86	48.43	-0.688	104416	105923	AT1G18570	AtMYB51	R2R3
RSG39460.t1/Rs219580.1	RsMYB40	318	36079.61	7.24	57.69	-0.765	56096	5729	AT3G01140	AtMYB106	R2R3

RSG17399.t1/Rs151460.1	RsMYB41	275	31540.61	8.57	56.26	-0.803	199973	200869	AT4G34990	AtMYB32	R2R3
RSG38989.t1/Rs307340.1	RsMYB42	350	39459.82	6.03	45.46	-0.737	60831	62580	AT1G18570	AtMYB51	R2R3
RSG48249.t1/Rs131050.1	RsMYB43	247	28791.1	5.75	43.37	-0.853	17361	18790	AT2G31180	AtMYB14	R2R3
RSG17723.t1/Rs193950.1	RsMYB44	290	31545.28	8.57	51.19	-0.626	41125	41997	AT2G23290	AtMYB70	R2R3
RSG19786.t1	RsMYB45	263	29645.01	4.81	41.29	-0.648	96639	98476	AT5G59780	AtMYB59	R2R3
RSG23170.t1/Rs272010.1	RsMYB46	302	34265.61	5.82	60	-0.638	129335	130434	AT5G10280	AtMYB92	R2R3
RSG23544.t1/Rs043970.1	RsMYB47	284	32570.79	8.45	52.64	-0.805	95506	96458	AT5G65230	AtMYB53	R2R3
RSG19787.t1	RsMYB48	486	53967.06	9.4	39.81	-0.564	112208	115883	AT5G60890	AtMYB34	R2R3
RSG07879.t1/Rs078930.1	RsMYB49	233	26985.4	8.97	62.36	-0.865	251350	252277	AT5G59780	AtMYB59	R2R3
RSG35006.t1	RsMYB50	232	25913.81	6.38	41.34	-0.68	8503	10828	AT3G27810	AtMYB21	R2R3
RSG08146.t1/Rs018080.1	RsMYB51	266	30108.86	7.06	45.11	-0.728	218685	219728	AT2G36890	AtMYB38	R2R3
RSG12604.t1/Rs382080.1	RsMYB52	277	31787.65	5.35	60.23	-0.677	23035	24792	AT1G74430	AtMYB95	R2R3
RSG13843.t1	RsMYB53	315	34935.11	5.37	39.03	-0.561	64452	65909	AT5G60890	AtMYB34	R2R3
RSG40634.t1	RsMYB54	364	40794.68	6.3	45.61	-0.62	63955	65324	AT1G34670	AtMYB93	R2R3
RSG20846.t1/Rs238990.1	RsMYB55	288	32652.85	6.72	48.21	-0.698	965	2089	AT3G23250	AtMYB15	R2R3
RSG11820.t1/Rs492050.1	RsMYB56	232	25907.61	6.23	33.59	-0.721	200429	202761	AT3G27810	AtMYB21	R2R3
RSG15299.t1/Rs305430.1	RsMYB57	274	31392.34	9.24	52.91	-0.828	261420	262392	AT4G13480	AtMYB79	R2R3
RSG39163.t1/Rs451710.1	RsMYB58	316	36561.19	8.55	48.87	-0.824	69314	70434	AT1G69560	AtMYB105	R2R3
RSG39276.t1/Rs457240.1	RsMYB59	238	27518.88	8.16	62.77	-0.88	46034	46944	AT3G46130	AtMYB48	R2R3
RSG44862.t1/Rs241000.1	RsMYB60	268	30893.83	9.53	49.97	-0.849	35346	36299	AT5G54230	AtMYB49	R2R3
RSG01461.t1/Rs398150.1	RsMYB61	314	35471.64	8.19	49.68	-0.874	847470	848587	AT3G01140	AtMYB106	R2R3

RSG02637.t1/Rs162790.1	RsMYB62	341	38604.42	5.42	52.12	-0.695	734249	735683	AT5G14340	AtMYB40	R2R3
RSG06902.t1/Rs289100.1	RsMYB63	207	24148.21	9.56	56.06	-0.944	436120	437002	AT3G27810	AtMYB21	R2R3
RSG10803.t1/Rs051380.1	RsMYB64	421	49183.2	6.26	53.42	-0.857	67986	69652	AT4G18770	AtMYB98	R2R3
RSG36531.t1/Rs156030.1	RsMYB65	282	31854.75	6.07	59.38	-0.55	38224	39644	AT4G28110	AtMYB41	R2R3
RSG26051.t1/Rs112040.1	RsMYB66	241	26848.13	9.12	41.64	-0.733	87412	88349	AT4G09460	AtMYB6	R2R3
RSG20198.t1/Rs386430.1	RsMYB67	333	37260.22	5.66	48.16	-0.835	16251	17650	AT1G74650	AtMYB31	R2R3
RSG36723.t1/Rs383480.1	RsMYB68	296	34452.9	8.62	55.85	-0.819	8619	9682	AT1G69560	AtMYB105	R2R3
RSG11106.t1/Rs228210.1	RsMYB69	294	32982.23	8.22	58.1	-0.69	217645	218723	AT3G12720	AtMYB67	R2R3
RSG09165.t1/Rs421150.1	RsMYB70	288	32275.83	8.89	41.5	-0.559	46604	47576	AT1G26780	AtMYB117	R2R3
RSG27876.t1/Rs416470.1	RsMYB71	348	40309.98	7.03	49.49	-0.891	135609	136956	AT1G26780	AtMYB117	R2R3
RSG44196.t1/Rs090530.1	RsMYB72	364	40160.15	9.15	47.64	-0.516	27307	29319	AT4G09460	AtMYB6	R2R3
RSG38151.t1	RsMYB73	208	23901.98	8.73	63.93	-0.76	16602	17561	AT5G55020	AtMYB120	R2R3
RSG22857.t1/Rs279060.1	RsMYB74	278	31915.82	9.32	45.16	-0.872	16579	17623	AT5G54230	AtMYB49	R2R3
RSG11382.t1/Rs461760.1	RsMYB75	324	36412.1	7.75	37.76	-0.715	274452	275955	AT3G49690	AtMYB84	R2R3
RSG10303.t1/Rs289850.1	RsMYB76	330	37030.33	7.71	53.11	-0.812	235839	237081	AT3G01140	AtMYB106	R2R3
RSG04996.t1/Rs488650.1	RsMYB77	345	38764.37	8.54	56.1	-0.634	107760	109003	AT5G26660	AtMYB86	R2R3
RSG21814.t1/Rs295410.1	RsMYB78	357	40401.19	7.02	51.42	-0.608	80722	81997	AT3G13890	AtMYB26	R2R3
RSG08063.t1/Rs296330.1	RsMYB79	294	33212.65	7.2	51.15	-0.61	332573	333886	AT3G12720	AtMYB67	R2R3
RSG12573.t1/Rs427120.1	RsMYB80	346	39932.03	6.13	42.86	-0.851	199803	201023	AT4G05100	AtMYB74	R2R3
RSG46516.t1/Rs489140.1	RsMYB81	337	37436.87	5.95	55.8	-0.655	289	1641	AT5G62470	AtMYB96	R2R3
RSG17672.t1/Rs375020.1	RsMYB82	279	31517.05	6.03	50.06	-0.894	24426	25439	AT1G79180	AtMYB63	R2R3

RSG52510.t1	RsMYB83	299	33202.18	5.58	75.02	-0.62	403	1534	AT5G60890	AtMYB34	R2R3
RSG46920.t1/Rs275910.1	RsMYB84	348	38711.1	6.13	52.81	-0.726	18658	20062	AT5G62470	AtMYB96	R2R3
RSG31387.t1/Rs174460.1	RsMYB85	324	36130.28	8.52	52.15	-0.637	30632	31778	AT3G28470	AtMYB35	R2R3
RSG38932.t1/Rs020110.1	RsMYB86	355	40970.88	6.74	57.62	-0.755	79506	80173	AT1G26780	AtMYB117	R2R3
RSG04615.t1/Rs064670.1	RsMYB87	315	35068.03	6.54	54.9	-0.729	253132	254343	AT3G01140	AtMYB106	R2R3
RSG02567.t1/Rs162000.1	RsMYB88	385	44464.57	8.25	57.5	-0.729	291643	293864	AT4G18770	AtMYB98	R2R3
RSG03012.t1/Rs274130.1	RsMYB89	287	33057.24	8.33	43.38	-0.841	349687	350220	AT2G16720	AtMYB7	R2R3
RSG02475.t1/Rs052230.1	RsMYB90	352	40246.44	5.91	48.08	-0.755	554985	556263	AT4G21440	AtMYB102	R2R3
RSG09883.t1/Rs293810.1	RsMYB91	399	43847.81	7.55	62.26	-0.71	58953	60935	AT3G29020	AtMYB110	R2R3
RSG20832.t1	RsMYB92	249	28857.07	9.86	71.32	-1.016	178511	179365	AT4G33450	AtMYB69	R2R3
RSG07362.t1/Rs386290.1	RsMYB93	279	31515.2	5.27	53.09	-0.656	21299	23002	AT3G61250	AtMYB17	R2R3
RSG05272.t1/Rs265380.1	RsMYB94	291	32313.48	7.58	49.43	-0.595	80086	81129	AT3G61250	AtMYB17	R2R3
RSG07389.t1/Rs386040.1	RsMYB95	327	36767.8	5.63	46.85	-0.758	141939	143421	AT1G74080	AtMYB122	R2R3
RSG28430.t1/Rs329100.1	RsMYB96	330	37002.96	6.52	56.3	-0.818	10867	12323	AT3G28910	AtMYB30	R2R3
RSG39248.t1/Rs340120.1	RsMYB97	247	28673.31	9.26	42.68	-0.849	76160	77380	AT1G17950	AtMYB52	R2R3
RSG36048.t1	RsMYB98	337	37667.05	8.58	57.6	-0.701	79757	81265	AT3G28910	AtMYB30	R2R3
RSG00576.t1	RsMYB99	250	28897.19	9.78	58.04	-1.036	79757	81265	AT3G28910	AtMYB30	R2R3
RSG21063.t1/Rs449110.1	RsMYB100	282	31990.2	5.1	58.99	-0.994	203396	204420	AT1G79180	AtMYB63	R2R3
RSG25940.t1/Rs376690.1	RsMYB101	275	30899.15	8.06	54.59	-0.503	132085	133147	AT3G61250	AtMYB17	R2R3
RSG22071.t1/Rs311120.1	RsMYB102	346	38597.09	5.77	58.72	-0.628	12234	13598	AT5G62470	AtMYB96	R2R3
RSG16088.t1/Rs311390.1	RsMYB103	363	40597.11	5.54	46.77	-0.727	94175	95982	AT5G07700	AtMYB76	R2R3

RSG25954.t1/Rs050650.1	RsMYB104	348	38903.51	5.42	43.31	-0.687	42680	44237	AT5G14340	AtMYB40	R2R3
RSG50067.t1/Rs223370.1	RsMYB105	321	36940.51	4.99	50.34	-0.916	2594	4621	AT3G06490	AtMYB108	R2R3
RSG30240.t1	RsMYB106	345	37466.25	8.15	68.02	-0.421	117101	119282	AT3G06490	AtMYB108	R2R3
RSG05210.t1	RsMYB107	335	38461.95	6.39	44.32	-0.679	680858	682068	AT4G21440	AtMYB102	R2R3
RSG21334.t1/Rs413130.1	RsMYB108	763	88396.24	9.31	44.46	-0.407	103366	106806	AT1G17950	AtMYB52	R2R3
RSG13142.t1/Rs314500.1	RsMYB109	318	36547.58	5.34	62.74	-0.803	327706	329632	AT3G06490	AtMYB108	R2R3
RSG23133.t1/Rs312700.1	RsMYB110	544	62093.47	9.19	65.33	-0.765	158317	159532	AT5G26660	AtMYB86	R2R3
RSG35978.t1/Rs132890.1	RsMYB111	195	22542.65	9.43	75.34	-0.81	369	770	AT5G26660	AtMYB86	R2R3
RSG06483.t1/Rs152110.1	RsMYB112	242	27878.14	9.4	61.98	-0.972	351939	352779	AT3G48920	AtMYB45	R2R3
RSG04638.t1	RsMYB113	366	41689.35	6	56.22	-0.699	398167	399974	AT1G63910	AtMYB103	R2R3
RSG16218.t1/Rs382070.1	RsMYB114	273	31082.83	5.19	53.29	-0.622	287972	289570	AT1G74430	AtMYB95	R2R3
RSG01870.t1/Rs141580.1	RsMYB115	1092	120114.47	8.43	42.4	-0.361	629373	634597	AT3G01140	AtMYB106	R2R3
RSG43901.t1/Rs261120.1	RsMYB116	392	43153.78	6.38	50.55	-0.512	30807	32453	AT3G55730	AtMYB109	R2R3
RSG41478.t1/Rs408760.1	RsMYB117	273	30951.55	5.8	54.2	-0.835	44104	45142	AT1G08810	AtMYB60	R2R3
RSG07541.t1/Rs004350.1	RsMYB118	253	28754.92	5.64	64.5	-0.807	54814	56117	AT1G06180	AtMYB13	R2R3
RSG19320.t1/Rs317260.1	RsMYB119	332	36773	8.39	56.26	-0.676	42241	43647	AT3G28910	AtMYB30	R2R3
RSG03176.t1/Rs140110.1	RsMYB120	313	35236.5	9.49	41.42	-0.781	112668	114398	AT5G17800	AtMYB56	R2R3
RSG22927.t1/Rs267930.1	RsMYB121	865	96762.69	5.44	61.16	-0.741	38388	42441	AT4G32730	AtMYB3R1	R1R2R3
RSG08006.t1	RsMYB122	428	50067.15	6.85	51.77	-0.889	10001	11712	AT3G48920	AtMYB45	R2R3
RSG16211.t1/Rs381970.1	RsMYB123	314	35443.24	6.07	47.7	-0.866	225871	227008	AT1G74650	AtMYB31	R2R3
RSG39269.t1	RsMYB124	428	50067.15	6.85	51.77	-0.889	51085	52350	AT2G32460	AtMYB101	R2R3

RSG51355.t1/Rs130300.1	RsMYB125	458	51182.95	5.37	47.58	-0.625	1847	3648	AT2G32460	AtMYB101	R2R3
RSG26068.t1/Rs383780.1	RsMYB126	284	32939.69	5.19	58.21	-0.889	59000	60040	AT1G68320	AtMYB62	R2R3
RSG16912.t1/Rs308820.1	RsMYB127	473	52810.01	6.29	53.69	-0.327	131250	134054	AT1G57560	AtMYB50	R2R3
RSG10519.t1/Rs351990.1	RsMYB128	400	45047.02	4.93	56.83	-0.732	183314	184810	AT2G26960	AtMYB81	R2R3
RSG32682.t1/Rs355890.1	RsMYB129	482	54502.69	5.28	46.56	-0.998	27130	29103	AT2G32460	AtMYB101	R2R3
RSG01136.t1/Rs365720.1	RsMYB130	382	42667.28	5.3	51.41	-0.787	218559	221000	AT2G47460	AtMYB12	R2R3
RSG13205.t1/Rs354910.1	RsMYB131	251	28995.67	8.2	44.5	-0.785	313048	314310	AT2G31180	AtMYB14	R2R3
RSG37435.t1/Rs094840.1	RsMYB132	249	28342.25	8.85	35.41	-0.735	69102	70736	AT1G56650/AT1G66390.1	AtMYB75/90	R2R3
RSG01742.t1	RsMYB133	279	31662.49	6.66	58.07	-0.718	16471	18416	AT5G12870	AtMYB46	R2R3
RSG53137.t1/Rs006890.1	RsMYB134	351	39048.52	8.43	48.69	-0.668	523	1786	AT1G57560	AtMYB50	R2R3
RSG03560.t1/Rs015060.1	RsMYB135	327	36647.98	5.62	37.19	-0.605	521919	523107	AT1G18570	AtMYB51	R2R3
RSG49987.t1/Rs174890.1	RsMYB136	481	54808.94	7.68	41.99	-0.661	1160	3521	AT3G27785	AtMYB118	R2R3
RSG23384.t1/Rs166410.1	RsMYB137	366	41450.93	5.57	51.21	-0.775	95315	96686	AT5G07690	AtMYB29	R2R3
RSG37130.t1/Rs072240.1	RsMYB138	342	38465.24	6.46	30.02	-0.704	95315	96686	AT5G62320	AtMYB99	R2R3
RSG28678.t1/Rs170710.1	RsMYB139	322	36600.93	6.25	49.6	-0.681	63568	65381	AT3G06490	AtMYB108	R2R3
RSG49768.t1/Rs107930.1	RsMYB140	428	47824.56	5.09	48.54	-0.775	7992	9428	AT2G26960	AtMYB81	R2R3
RSG39462.t1/Rs100960.1	RsMYB141	340	38000.15	5.76	49.81	-0.793	4265	5780	AT1G74650	AtMYB31	R2R3
RSG32738.t1/Rs443870.1	RsMYB142	258	29310.63	9.12	48.94	-0.573	90538	91476	AT5G35550	AtMYB123	R2R3
RSG03875.t1/Rs286400.1	RsMYB143	337	37840.11	6.31	32.34	-0.764	542222	543457	AT3G08500	AtMYB83	R2R3
RSG00789.t1/Rs145370.1	RsMYB144	340	38371.3	4.79	45.76	-0.833	393172	394589	AT5G07700	AtMYB76	R2R3
RSG23016.t1	RsMYB145	266	30811.92	9.78	59.21	-0.891	133041	134078	AT3G09370	AtMYB3R3	R1R2R3

RSG37096.t1	RsMYB146	345	38647.16	7.6	49.91	-0.644	57364	58652	AT1G57560	AtMYB50	R2R3
RSG16786.t1/Rs447350.1	RsMYB147	309	35160.93	5.3	66.35	-0.824	394312	395412	AT1G56160	AtMYB72	R2R3
RSG09998.t1/Rs292800.1	RsMYB148	311	35887.56	4.92	54.93	-0.879	584841	587061	AT3G06490	AtMYB108	R2R3
RSG08776.t1/Rs211070.1	RsMYB149	277	31858.24	5.38	53.27	-0.816	350024	351217	AT2G39880	AtMYB25	R2R3
RSG28398.t1/Rs464340.1	RsMYB150	492	55155.01	7.92	48.61	-0.41	115576	118323	AT4G01680	AtMYB55	R2R3
RSG31330.t1/Rs491290.1	RsMYB151	341	38866.18	5.14	43.94	-0.808	30991	34169	AT5G49330	AtMYB111	R2R3
RSG42744.t1/Rs136680.1	RsMYB152	422	47657.85	7.01	54.12	-0.953	43156	44678	AT5G58850	AtMYB119	R2R3
RSG09916.t1/Rs293540.1	RsMYB153	314	35407.17	6.75	39.79	-0.533	191496	192548	AT3G08500	AtMYB83	R2R3
RSG05592.t1/Rs396150.1	RsMYB154	279	31567.41	6	61.68	-0.65	216630	218685	AT5G12870	AtMYB46	R2R3
RSG39713.t1/Rs224730.1	RsMYB155	338	37888.1	5.39	47.28	-0.704	2990	4212	AT3G08500	AtMYB83	R2R3
RSG22884.t1/Rs278810.1	RsMYB156	206	23681.2	7.59	43.03	-0.746	150615	152264	AT5G02320	AtMYB3R5	R1R2R3
RSG25598.t1/Rs333100.1	RsMYB157	416	45407.5	8.88	49.1	-0.444	32565	33989	AT3G48920	AtMYB45	R2R3
RSG15326.t1/Rs066180.1	RsMYB158	279	31618.4	5.9	58.67	-0.696	107142	110029	AT5G12870	AtMYB46	R2R3
RSG40032.t1	RsMYB159	572	63963.88	6.34	60.95	-0.917	20571	22470	AT5G55020	AtMYB120	R2R3
RSG46872.t1/Rs229050.1	RsMYB160	252	28087.78	8.77	51.56	-0.648	10097	11439	AT3G13540	AtMYB5	R2R3
RSG01155.t1/Rs365570.1	RsMYB161	275	31509.63	5.21	56.9	-0.868	335650	336693	AT2G39880	AtMYB25	R2R3
RSG35162.t1/Rs452850.1	RsMYB162	289	33581.2	5.26	55.61	-0.881	132015	133058	AT1G68320	AtMYB62	R2R3
RSG12460.t1/Rs275780.1	RsMYB163	239	26781.92	5.33	41.47	-0.702	313392	314347	AT5G62320	AtMYB99	R2R3
RSG20718.t1/Rs200280.1	RsMYB164	462	51318.61	5.12	47.98	-0.765	180714	182602	AT2G32460	AtMYB101	R2R3
RSG41325.t1/Rs078280.1	RsMYB165	421	47646.32	9.1	51.52	-0.999	23193	24748	AT5G58850	AtMYB119	R2R3
RSG07726.t1/Rs500600.1	RsMYB166	389	44189.25	5.02	50.19	-0.745	461569	464221	AT1G58220	AtMYB11	MYB-1R (MYB-related gene)



RSG06173.t1	RsMYB167	356	39727.22	8.07	52.81	-0.688	131909	133203	AT1G57560	AtMYB50	R2R3
RSG17654.t1/Rs071360.1	RsMYB168	204	23388.36	9.05	70.11	-0.926	234220	235008	AT5G52600	AtMYB82	R2R3
RSG08263.t1/Rs055070.1	RsMYB169	267	30124.55	6.35	38.68	-0.793	186284	187620	AT4G22680	AtMYB85	R2R3
RSG42419.t1/Rs227230.1	RsMYB170	513	56791.61	5.27	72.23	-0.551	21616	23350	AT3G11440	AtMYB65	R2R3
RSG26487.t1/Rs257960.1	RsMYB171	246	29014.4	6.07	60.26	-0.974	27823	28811	AT3G11440	AtMYB65	R2R3
RSG38018.t1	RsMYB172	282	32248.58	5.46	53.76	-0.662	70552	71495	AT1G66230	AtMYB20	R2R3
RSG24956.t1/Rs134150.1	RsMYB173	568	62959.44	6.28	56.92	-0.915	119589	121630	AT5G55020	AtMYB120	R2R3
RSG23847.t1/Rs429660.1	RsMYB174	258	29284.54	6.36	48.86	-0.888	45276	46470	AT1G66230	AtMYB20	R2R3
RSG28432.t1/Rs489850.1	RsMYB175	282	32309.38	8.95	65.42	-0.782	25097	26423	AT4G26930	AtMYB97	R2R3
RSG35885.t1/Rs077540.1	RsMYB176	331	37652.34	7.14	58.82	-0.694	140664	142266	AT5G57620	AtMYB36	R2R3
RSG04502.t1/Rs358890.1	RsMYB177	292	33136.3	6.94	72.43	-0.729	242096	243553	AT2G36890	AtMYB38	R2R3
RSG11525.t1/Rs135860.1	RsMYB178	333	37697.12	7.66	60.79	-0.78	146498	148136	AT5G57620	AtMYB36	R2R3
RSG07019.t1/Rs021110.1	RsMYB179	287	33265.44	6.71	51.98	-0.827	119392	120609	AT5G16600	AtMYB43	R2R3
RSG22256.t1	RsMYB180	313	35754.9	5.22	45.24	-0.75	115897	117832	AT5G16600	AtMYB43	R2R3
RSG14921.t1/Rs159820.1	RsMYB181	269	30445.68	5.64	49.05	-0.873	162090	163409	AT1G66230	AtMYB20	R2R3
RSG51646.t1/Rs272850.1	RsMYB182	366	41392.12	5.55	57.88	-0.764	463	1811	AT3G49690	AtMYB84	R2R3
RSG14612.t1/Rs500540.1	RsMYB183	357	40096.64	5.68	56.76	-0.759	430100	431391	AT5G62320	AtMYB99	R2R3
RSG01828.t1/Rs142190.1	RsMYB184	232	26853.43	6.4	49.81	-0.686	431271	432382	AT5G23000	AtMYB37	R2R3
RSG11844.t1	RsMYB185	500	55307.43	5.49	50.73	-0.63	12398	14054	AT3G47600	AtMYB94	R2R3
RSG33672.t1/Rs079690.1	RsMYB186	329	36760.05	8.93	59.62	-0.695	45524	46858	AT5G23000	AtMYB37	R2R3
RSG41286.t1/Rs310090.1	RsMYB187	374	41868.62	5.74	54.34	-0.724	92032	93367	AT3G49690	AtMYB84	R2R3

2 **Appendix B** Whole-genome duplicated gene pairs of RsMYB genes in radish.

<b>Duplicated pair gene 1</b>	<b>Gene ID1</b>	<b>Gene ID2</b>	<b>Duplicated pair gene 2</b>	<b>Gene ID1</b>	<b>Gene ID2</b>	<b>E-Value</b>
RsMYB118	Rs004350	RSG07541.t1	RsMYB43	Rs131050	RSG48249.t1	2E-81
RsMYB118	Rs004350	RSG07541.t1	RsMYB29	Rs199790	RSG18980.t1	3E-75
RsMYB51	Rs018080	RSG08146.t1	RsMYB22	Rs333170	RSG35382.t1	4E-145
RsMYB118	Rs004350	RSG07541.t1	RsMYB131	Rs354910	RSG13205.t1	4E-76
RsMYB135	Rs015060	RSG03560.t1	RsMYB42	Rs307340	RSG38989.t1	2E-154
RsMYB135	Rs015060	RSG03560.t1	RsMYB95	Rs386040	RSG07389.t1	2E-98
RsMYB135	Rs015060	RSG03560.t1	RsMYB39	Rs413390	RSG34945.t1	3E-159
RsMYB86	Rs020110	RSG38932.t1	RsMYB71	Rs416470	RSG27876.t1	6E-168
RsMYB49	Rs078930	RSG07879.t1	RsMYB28	Rs137190	RSG26031.t1	1E-146
RsMYB165	Rs078280	RSG41325.t1	RsMYB152	Rs136680	RSG42744.t1	0
RsMYB176	Rs077540	RSG35885.t1	RsMYB178	Rs135860	RSG11525.t1	0
RsMYB14	Rs067460	RSG31594.t1	RsMYB15	Rs144280	RSG13917.t1	1E-153
RsMYB168	Rs071360	RSG17654.t1	RsMYB111	Rs132890	RSG35978.t1	5E-85
RsMYB104	Rs050650	RSG25954.t1	RsMYB62	Rs162790	RSG02637.t1	2E-90
RsMYB64	Rs051380	RSG10803.t1	RsMYB88	Rs162000	RSG02567.t1	8E-179
RsMYB169	Rs055070	RSG08263.t1	RsMYB181	Rs159820	RSG14921.t1	8E-151
RsMYB34	Rs060270	RSG00270.t1	RsMYB65	Rs156030	RSG36531.t1	2E-145
RsMYB4	Rs045680	RSG00515.t1	RsMYB6	Rs152470	RSG06448.t1	0

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RsMYB12	Rs041020	RSG23281.t1	RsMYB44	Rs193950	RSG17723.t1	4E-112
RsMYB87	Rs064670	RSG04615.t1	RsMYB40	Rs219580	RSG39460.t1	7E-108
RsMYB14	Rs067460	RSG31594.t1	RsMYB46	Rs272010	RSG23170.t1	6E-111
RsMYB49	Rs078930	RSG07879.t1	RsMYB31	Rs344380	RSG23766.t1	6E-117
RsMYB87	Rs064670	RSG04615.t1	RsMYB76	Rs289850	RSG10303.t1	6E-109
RsMYB12	Rs041020	RSG23281.t1	RsMYB38	Rs350910	RSG37948.t1	3E-92
RsMYB141	Rs100960	RSG39462.t1	RsMYB67	Rs386430	RSG20198.t1	4E-149
RsMYB14	Rs067460	RSG31594.t1	RsMYB26	Rs394210	RSG26906.t1	1E-177
RsMYB158	Rs066180	RSG15326.t1	RsMYB154	Rs396150	RSG05592.t1	5E-157
RsMYB87	Rs064670	RSG04615.t1	RsMYB61	Rs398150	RSG01461.t1	2E-140
RsMYB141	Rs100960	RSG39462.t1	RsMYB123	Rs381970	RSG16211.t1	3E-138
RsMYB4	Rs045680	RSG00515.t1	RsMYB5	Rs428790	RSG44012.t1	0
RsMYB90	Rs052230	RSG02475.t1	RsMYB80	Rs427120	RSG12573.t1	5E-156
RsMYB169	Rs055070	RSG08263.t1	RsMYB174	Rs429660	RSG23847.t1	5E-149
RsMYB27	Rs057700	RSG34421.t1	RsMYB108	Rs413130	RSG21334.t1	2E-102
RsMYB12	Rs041020	RSG23281.t1	RsMYB20	Rs420430	RSG10184.t1	3E-169
RsMYB138	Rs072240	RSG37130.t1	RsMYB75	Rs461760	RSG11382.t1	2E-168
RsMYB27	Rs057700	RSG34421.t1	RsMYB21	Rs456260	RSG14079.t1	1E-139
RsMYB49	Rs078930	RSG07879.t1	RsMYB59	Rs457240	RSG39276.t1	6E-142
RsMYB125	Rs130300	RSG51355.t1	RsMYB164	Rs200280	RSG20718.t1	3E-178
RsMYB43	Rs131050	RSG48249.t1	RsMYB29	Rs199790	RSG18980.t1	1E-147

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RsMYB144	Rs145370	RSG00789.t1	RsMYB137	Rs166410	RSG23384.t1	1E-112
RsMYB15	Rs144280	RSG13917.t1	RsMYB46	Rs272010	RSG23170.t1	1E-103
RsMYB125	Rs130300	RSG51355.t1	RsMYB129	Rs355890	RSG32682.t1	2E-177
RsMYB43	Rs131050	RSG48249.t1	RsMYB131	Rs354910	RSG13205.t1	3E-139
RsMYB28	Rs137190	RSG26031.t1	RsMYB31	Rs344380	RSG23766.t1	9E-120
RsMYB144	Rs145370	RSG00789.t1	RsMYB103	Rs311390	RSG16088.t1	3E-117
RsMYB15	Rs144280	RSG13917.t1	RsMYB26	Rs394210	RSG26906.t1	3E-152
RsMYB28	Rs137190	RSG26031.t1	RsMYB59	Rs457240	RSG39276.t1	6E-144
RsMYB41	Rs151460	RSG17399.t1	RsMYB89	Rs274130	RSG03012.t1	1E-105
RsMYB164	Rs200280	RSG20718.t1	RsMYB129	Rs355890	RSG32682.t1	0
RsMYB139	Rs170710	RSG28678.t1	RsMYB109	Rs314500	RSG13142.t1	2E-150
RsMYB44	Rs193950	RSG17723.t1	RsMYB38	Rs350910	RSG37948.t1	9E-80
RsMYB35	Rs149760	RSG22060.t1	RsMYB70	Rs421150	RSG09165.t1	8E-173
RsMYB181	Rs159820	RSG14921.t1	RsMYB174	Rs429660	RSG23847.t1	4E-116
RsMYB6	Rs152470	RSG06448.t1	RsMYB5	Rs428790	RSG44012.t1	0
RsMYB16	Rs189000	RSG20912.t1	RsMYB24	Rs492030	RSG11822.t1	8E-72
RsMYB155	Rs224730	RSG39713.t1	RsMYB143	Rs286400	RSG03875.t1	0
RsMYB60	Rs241000	RSG44862.t1	RsMYB74	Rs279060	RSG22857.t1	5E-131
RsMYB105	Rs223370	RSG50067.t1	RsMYB148	Rs292800	RSG09998.t1	4E-153
RsMYB155	Rs224730	RSG39713.t1	RsMYB153	Rs293540	RSG09916.t1	1E-140
RsMYB3	Rs225360	RSG40289.t1	RsMYB2	Rs294280	RSG29867.t1	0

RsMYB69	Rs228210	RSG11106.t1	RsMYB79	Rs296330	RSG08063.t1	0
RsMYB60	Rs241000	RSG44862.t1	RsMYB57	Rs305430	RSG15299.t1	2E-139
RsMYB182	Rs272850	RSG51646.t1	RsMYB187	Rs310090	RSG41286.t1	0
RsMYB40	Rs219580	RSG39460.t1	RsMYB76	Rs289850	RSG10303.t1	1E-153
RsMYB84	Rs275910	RSG46920.t1	RsMYB102	Rs311120	RSG22071.t1	5E-169
RsMYB105	Rs223370	RSG50067.t1	RsMYB109	Rs314500	RSG13142.t1	4E-97
RsMYB116	Rs261120	RSG43901.t1	RsMYB157	Rs333100	RSG25598.t1	2E-119
RsMYB143	Rs286400	RSG03875.t1	RsMYB153	Rs293540	RSG09916.t1	1E-143
RsMYB74	Rs279060	RSG22857.t1	RsMYB57	Rs305430	RSG15299.t1	2E-122
RsMYB32	Rs278740	RSG22891.t1	RsMYB37	Rs304490	RSG28205.t1	2E-144
RsMYB94	Rs265380	RSG05272.t1	RsMYB101	Rs376690	RSG25940.t1	8E-129
RsMYB46	Rs272010	RSG23170.t1	RsMYB26	Rs394210	RSG26906.t1	4E-97
RsMYB40	Rs219580	RSG39460.t1	RsMYB61	Rs398150	RSG01461.t1	3E-107
RsMYB18	Rs219790	RSG27407.t1	RsMYB25	Rs399360	RSG01354.t1	2E-129
RsMYB182	Rs272850	RSG51646.t1	RsMYB183	Rs500540	RSG14612.t1	1E-178
RsMYB23	Rs342130	RSG17511.t1	RsMYB38	Rs350910	RSG37948.t1	1E-76
RsMYB42	Rs307340	RSG38989.t1	RsMYB95	Rs386040	RSG07389.t1	3E-104
RsMYB76	Rs289850	RSG10303.t1	RsMYB61	Rs398150	RSG01461.t1	1E-106
RsMYB11	Rs290380	RSG10248.t1	RsMYB25	Rs399360	RSG01354.t1	1E-124
RsMYB42	Rs307340	RSG38989.t1	RsMYB39	Rs413390	RSG34945.t1	5E-158
RsMYB187	Rs310090	RSG41286.t1	RsMYB183	Rs500540	RSG14612.t1	1E-164

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RsMYB110	Rs312700	RSG23133.t1	RsMYB77	Rs488650	RSG04996.t1	2E-178
RsMYB119	Rs317260	RSG19320.t1	RsMYB81	Rs489140	RSG46516.t1	7E-92
RsMYB67	Rs386430	RSG20198.t1	RsMYB123	Rs381970	RSG16211.t1	5E-167
RsMYB93	Rs386290	RSG07362.t1	RsMYB52	Rs382080	RSG12604.t1	4E-135
RsMYB95	Rs386040	RSG07389.t1	RsMYB39	Rs413390	RSG34945.t1	9E-101
RsMYB126	Rs383780	RSG26068.t1	RsMYB162	Rs452850	RSG35162.t1	8E-152
RsMYB82	Rs375020	RSG17672.t1	RsMYB100	Rs449110	RSG21063.t1	2E-84
RsMYB108	Rs413130	RSG21334.t1	RsMYB21	Rs456260	RSG14079.t1	3E-102

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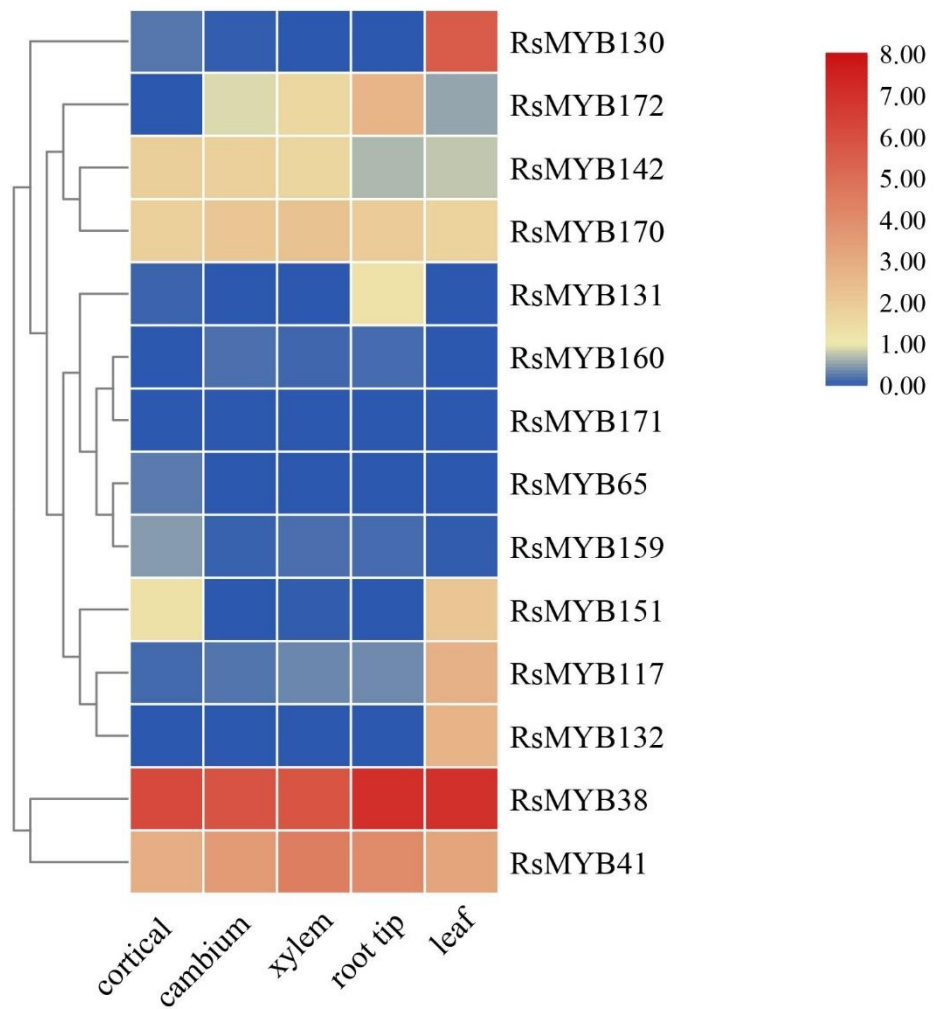
19 **Appendix C** All MEME motif sequences in RsMYB proteins.

<b>MOTIF ID</b>	<b>BEST POSSIBLE MATCH</b>	<b>WIDTH</b>
1	CRLRWTNYLRPDJKRGNFTPEEEELIELHALLGNRWSAIAARLPGRT	50
2	KKGPWTPEEDZKLINYIQKHGEGN	21
3	DNEIKNYWNTHLKKKLRKMGIDPVTHKP	21
4	GQWTPEEDEVLKKAVERFQGNWKKIAEFFPDRTDVQCLHRWQKVLNPEL	11
5	TISANNRSINKGQWERRLQTDINMAKQALSEALSLD	15
6	GGLSKNAATLSHMAQWESARLEAEARLARESPLLHYQTK	8
7	EFMTVVQEMIKAEVRSYMAELQRGNGGG	36
8	HLNVLAALPQLIAAANFNLLNLNQNQIKDATEMAKLQLLHYLJQVLSTN	37
9	YSIFDGTDPFKKLETPSPWKSPLLFGSFLQSPKLPPDITFEDIGCFMSPG	29
10	STPSTTSPLTTQETSTTYASSTENIAKLLQGWMKSSPKTPTTS	29
11	KDTMRYLWMPRLVERIQANSASST	47
12	GLDNQGSLSLFEKWLFDNGVVISDDDQ	41
13	DSSEKEKSSVPFFDFLGVGT	29
14	PPLASPAWESSLESIWNMDADESKMSSFAIDQFPLSFEH	41
15	NYVDESGFAPLNQTIFIRDQEHMKEEDFPFEVVDQSKPTSFLQDFHHLDH	41
16	TTATTTDTGGSPGKMBQECEDGYYSMDDIWREIDQSGGN	11
17	QPWCDIIDDEASDSYWKEIIE	49
18	CYEPPRFPSADIPFFSCDLVPSNSDLRQEYSPFGIRQLM	21
19	KSSSSARLLNRVAAKYSSR	8
20	SYLREAAKTFPGAPSILRKRRRDLLVPV	29

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24 **Appendix D** Transcription level of 14 R2R3MYBs selected for RT-qPCR analysis from the radish transcriptome data (Mitsui *et al.* 2015).

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26 **Appendix E** Primers used for RT-qPCR of 14 R2R3 RsMYBs.

<b>Gene</b>	<b>Forward</b>	<b>Reverse</b>
<i>RsMYB38</i>	ACGTCGTCGTCGTCTTTTGA	GATGTCTCGACGAATCGGCT
<i>RsMYB 41</i>	CCGGGAAGAACAGACAACGA	TCTCGACGAGCTTTGATCGG
<i>RsMYB65</i>	AAGACTCTCAGCCACAAGCC	GAGTTGGCTCCTGCCTCAAT
<i>RsMYB117</i>	CTTCAGCCGCAAGAAACACC	ACATGCTCGTATGGAGGCTG
<i>RsMYB130</i>	CTCGACCCTCTTCATGAGCC	TTGCCAAACACAGTCCCAGT
<i>RsMYB131</i>	CAGGCATCAAACGTGGCAAT	TCGGTTCGTCCTGGCAATTT
<i>RsMYB132</i>	GCTGGTAGATTACCCGGTGC	TGAAGGATCGAGGTCGAGGT
<i>RsMYB142</i>	ACCAGGCATAAAGCGTGGA	TGGAAGTGTTTTGCGGAGGT
<i>RsMYB151</i>	CGGTCTAAACGTCACCGACT	TTGTGGGGTACATTGCGAGG
<i>RsMYB159</i>	TCAACTCTCTCCACACCGC	ATTGTTGTAGCGTCTGGCGA
<i>RsMYB160</i>	CACCGTTAGCAGCGGAAATG	AACGGCTGGGACAATACTGG
<i>RsMYB170</i>	AAAGCTGTCGTCTCAGGTGG	TACCCATCTTGGCGTGCATT
<i>RsMYB171</i>	ACCCTTTTGGGAGAACGTCG	TACCCCAGAAAGCATGGAGC
<i>RsMYB172</i>	ATGCTGCGACAAAGTAGGGT	ACAACCTTTGCCACACCTGA

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