Additional File 2: Table S2: $\chi 2$-test statistics testing of markers showing Mendelian inheritance for goodness of fit

Marker	Missing	Observed Frequency			Expected Frequency (1:2:1)			(O-E)^2/E			Total $\chi 2$ value
		BR29 (P1)	Hetero	Capsule (P2)	BR29 (P1)	Hetero	Capsule (P2)	BR29 (P1)	Hetero	Capsule (P2)	
RM3252	0	17	59	18	23.5	47	23.5	1.798	3.064	1.287	**6.149**
RM428A	1	21	48	24	23.5	47	23.5	0.266	0.021	0.011	**0.298**
RM490	0	18	46	30	23.5	47	23.5	1.287	0.021	1.798	**3.106**
RM575	9	16	42	27	23.5	47	23.5	2.394	0.532	0.521	**3.447**
AP3206f	0	23	42	29	23.5	47	23.5	0.011	0.532	1.287	**1.830**
RM3412b	0	22	48	24	23.5	47	23.5	0.096	0.021	0.011	**0.128**
RM10793	0	24	45	25	23.5	47	23.5	0.011	0.085	0.096	**0.191**
RM562	0	23	46	25	23.5	47	23.5	0.011	0.021	0.096	**0.128**
RM449	0	22	45	27	23.5	47	23.5	0.096	0.085	0.521	**0.702**
RM11125	5	19	41	29	23.5	47	23.5	0.862	0.766	1.287	**2.915**
RM9	0	10	51	33	23.5	47	23.5	7.755	0.340	3.840	**11.936**
RM246	2	22	51	19	23.5	47	23.5	0.096	0.340	0.862	**1.298**
RM11570	12	24	36	22	23.5	47	23.5	0.011	2.574	0.096	**2.681**
RM472	5	22	44	23	23.5	47	23.5	0.096	0.191	0.011	**0.298**
RM12208	1	23	51	19	23.5	47	23.5	0.011	0.340	0.862	**1.213**
RM14	0	18	50	26	23.5	47	23.5	1.287	0.191	0.266	**1.745**
RM154	0	20	59	15	23.5	47	23.5	0.521	3.064	3.074	**6.660**
RM279	0	30	46	18	23.5	47	23.5	1.798	0.021	1.287	**3.106**
RM300	0	26	46	22	23.5	47	23.5	0.266	0.021	0.096	**0.383**
RM13197	2	34	42	16	23.5	47	23.5	4.691	0.532	2.394	**7.617**
RM2634	2	22	48	22	23.5	47	23.5	0.096	0.021	0.096	**0.213**
RM13628	0	25	50	19	23.5	47	23.5	0.096	0.191	0.862	**1.149**
RM525	0	29	47	18	23.5	47	23.5	1.287	0.000	1.287	**2.574**
RM208	2	26	39	27	23.5	47	23.5	0.266	1.362	0.521	**2.149**
RM22	0	30	47	17	23.5	47	23.5	1.798	0.000	1.798	**3.596**

RM14795	6	19	48	21	23.5	47	23.5	0.862	0.021	0.266	**1.149**
RM5928	1	21	55	17	23.5	47	23.5	0.266	1.362	1.798	**3.426**
RM3291	1	24	48	21	23.5	47	23.5	0.011	0.021	0.266	**0.298**
S03076B	0	24	43	27	23.5	47	23.5	0.011	0.340	0.521	**0.872**
RM251	3	22	47	22	23.5	47	23.5	0.096	0.000	0.096	**0.191**
RM4730	7	16	53	18	23.5	47	23.5	2.394	0.766	1.287	**4.447**
RM5626	0	22	49	23	23.5	47	23.5	0.096	0.085	0.011	**0.191**
RM6329	1	25	50	18	23.5	47	23.5	0.096	0.191	1.287	**1.574**
R3M53	0	26	54	14	23.5	47	23.5	0.266	1.043	3.840	**5.149**
RM148	1	19	37	37	23.5	47	23.5	0.862	2.128	7.755	**10.745**
RM16236	5	30	41	18	23.5	47	23.5	1.798	0.766	1.287	**3.851**
RM335	0	25	49	20	23.5	47	23.5	0.096	0.085	0.521	**0.702**
RM518	1	22	49	22	23.5	47	23.5	0.096	0.085	0.096	**0.277**
RM261	10	14	34	36	23.5	47	23.5	3.840	3.596	6.649	**14.085**
RM16686	5	21	46	22	23.5	47	23.5	0.266	0.021	0.096	**0.383**
S04065	0	24	49	21	23.5	47	23.5	0.011	0.085	0.266	**0.362**
RM16852	14	16	43	21	23.5	47	23.5	2.394	0.340	0.266	**3.000**
RM252A	5	22	56	11	23.5	47	23.5	0.096	1.723	6.649	**8.468**
RM3839	0	18	52	24	23.5	47	23.5	1.287	0.532	0.011	**1.830**
RM26212	2	22	38	32	23.5	47	23.5	0.096	1.723	3.074	**4.894**
RM280	9	19	39	27	23.5	47	23.5	0.862	1.362	0.521	**2.745**
RM17954	1	14	57	22	23.5	47	23.5	3.840	2.128	0.096	**6.064**
RM169	0	24	41	29	23.5	47	23.5	0.011	0.766	1.287	**2.064**
RM249	0	26	41	27	23.5	47	23.5	0.266	0.766	0.521	**1.553**
R5M20	0	25	43	26	23.5	47	23.5	0.096	0.340	0.266	**0.702**
RM163	0	23	44	27	23.5	47	23.5	0.011	0.191	0.521	**0.723**
RM3870	0	21	52	21	23.5	47	23.5	0.266	0.532	0.266	**1.064**
RM3809	8	21	45	20	23.5	47	23.5	0.266	0.085	0.521	**0.872**
RM19199	10	33	29	22	23.5	47	23.5	3.840	6.894	0.096	**10.830**

RM19238	0	11	50	33	23.5	47	23.5	6.649	0.191	3.840	**10.681**
RM402	0	32	46	16	23.5	47	23.5	3.074	0.021	2.394	**5.489**
R6M14	1	35	39	19	23.5	47	23.5	5.628	1.362	0.862	**7.851**
RM19840	0	33	46	15	23.5	47	23.5	3.840	0.021	3.074	**6.936**
RM3628	0	30	43	21	23.5	47	23.5	1.798	0.340	0.266	**2.404**
RM3138	1	26	45	22	23.5	47	23.5	0.266	0.085	0.096	**0.447**
RM20783	9	17	44	24	23.5	47	23.5	1.798	0.191	0.011	**2.000**
RM180	1	27	46	20	23.5	47	23.5	0.521	0.021	0.521	**1.064**
RM501A	5	21	49	19	23.5	47	23.5	0.266	0.085	0.862	**1.213**
RM336	3	24	54	13	23.5	47	23.5	0.011	1.043	4.691	**5.745**
RM3753	0	25	57	12	23.5	47	23.5	0.096	2.128	5.628	**7.851**
RM248	0	38	44	12	23.5	47	23.5	8.947	0.191	5.628	**14.766**
RM428B	1	21	48	24	23.5	47	23.5	0.266	0.021	0.011	**0.298**
RM152	0	17	55	22	23.5	47	23.5	1.798	1.362	0.096	**3.255**
RM547	0	19	49	26	23.5	47	23.5	0.862	0.085	0.266	**1.213**
RM22825	8	20	41	25	23.5	47	23.5	0.521	0.766	0.096	**1.383**
RM331	0	16	53	25	23.5	47	23.5	2.394	0.766	0.096	**3.255**
RM483	10	23	44	17	23.5	47	23.5	0.011	0.191	1.798	**2.000**
RM223	0	15	57	22	23.5	47	23.5	3.074	2.128	0.096	**5.298**
RM210	10	17	51	18	23.5	47	23.5	1.798	0.340	1.287	**3.426**
RM3571	0	19	51	24	23.5	47	23.5	0.862	0.340	0.011	**1.213**
RM3120	4	30	37	23	23.5	47	23.5	1.798	2.128	0.011	**3.936**
RM296	0	14	63	17	23.5	47	23.5	3.840	5.447	1.798	**11.085**
R9M10	1	19	50	24	23.5	47	23.5	0.862	0.191	0.011	**1.064**
RM6051	0	18	57	19	23.5	47	23.5	1.287	2.128	0.862	**4.277**
R9M30	1	20	59	14	23.5	47	23.5	0.521	3.064	3.840	**7.426**
RM242	1	21	60	12	23.5	47	23.5	0.266	3.596	5.628	**9.489**
RM24804	10	19	44	21	23.5	47	23.5	0.862	0.191	0.266	**1.319**
RM222	0	28	42	24	23.5	47	23.5	0.862	0.532	0.011	**1.404**

RM501C	5	21	49	19	23.5	47	23.5	0.266	0.085	0.862	**1.213**
R10M17	0	28	43	23	23.5	47	23.5	0.862	0.340	0.011	**1.213**
RM5806	2	21	54	17	23.5	47	23.5	0.266	1.043	1.798	**3.106**
RM304	2	14	59	19	23.5	47	23.5	3.840	3.064	0.862	**7.766**
RM496	0	21	55	18	23.5	47	23.5	0.266	1.362	1.287	**2.915**
RM25972	5	21	50	18	23.5	47	23.5	0.266	0.191	1.287	**1.745**
RM26212A	2	22	38	32	23.5	47	23.5	0.096	1.723	3.074	**4.894**
RM26237	3	20	47	24	23.5	47	23.5	0.521	0.000	0.011	**0.532**
RM3137	0	21	45	28	23.5	47	23.5	0.266	0.085	0.862	**1.213**
RM26652	0	18	50	26	23.5	47	23.5	1.287	0.191	0.266	**1.745**
RM21	0	26	43	25	23.5	47	23.5	0.266	0.340	0.096	**0.702**
RM6094	0	21	51	22	23.5	47	23.5	0.266	0.340	0.096	**0.702**
RM224	0	18	52	24	23.5	47	23.5	1.287	0.532	0.011	**1.830**
RM27421	7	23	45	19	23.5	47	23.5	0.011	0.085	0.862	**0.957**
RM27615	4	20	49	21	23.5	47	23.5	0.521	0.085	0.266	**0.872**
RM252B	5	22	56	11	23.5	47	23.5	0.096	1.723	6.649	**8.468**
RM27877	0	21	60	13	23.5	47	23.5	0.266	3.596	4.691	**8.553**
RM7102	0	21	60	13	23.5	47	23.5	0.266	3.596	4.691	**8.553**
S12055	0	21	60	13	23.5	47	23.5	0.266	3.596	4.691	**8.553**
R12M27	0	15	60	19	23.5	47	23.5	3.074	3.596	0.862	**7.532**
RM28466	7	22	43	22	23.5	47	23.5	0.096	0.340	0.096	**0.532**
RM17	0	26	41	27	23.5	47	23.5	0.266	0.766	0.521	**1.553**

Tabulated χ^2 value = 5.99 and 9.21 at *P*<0.05 level and *P*<0.01 level, respectively

Out of 105 markers, 82 non-distorted markers