Supplementary Materials: Genome-Wide Identification, Evolutionary Analysis and Stress Responses of *GRAS* Gene Family in Castor Bean

Wei Xu, Zexi Chen, Naeem Ahmed, Bing Han, Qinghua Cui and Aizhong Liu

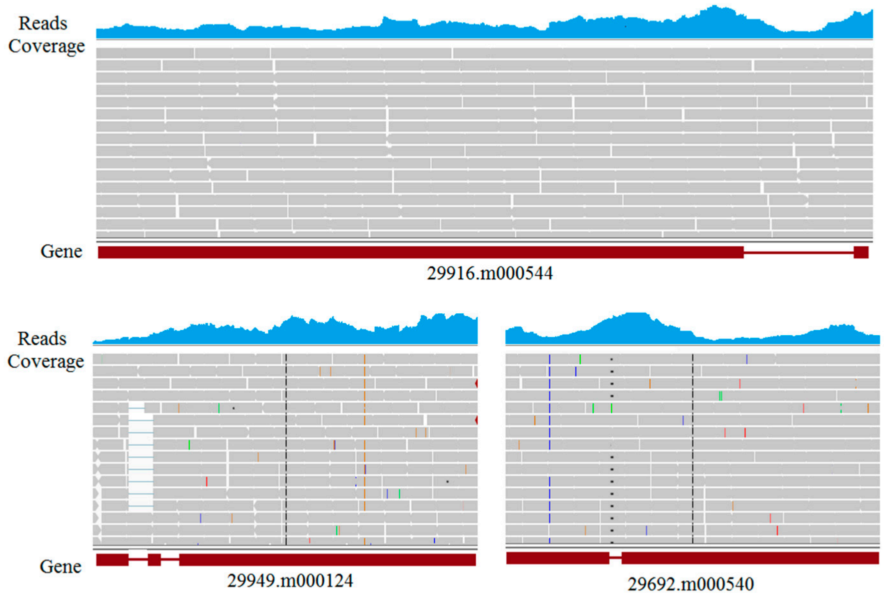
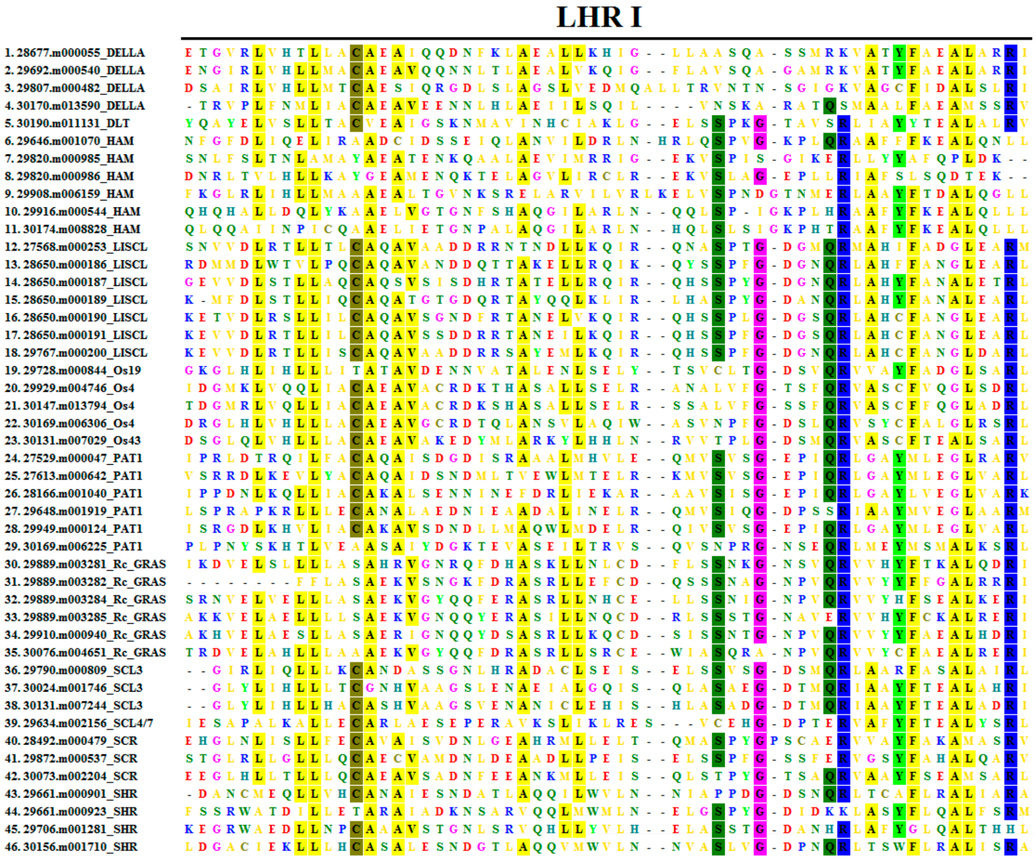


Figure S1. Visualization of the reads coverage on genic regions of three predicted *GRAS* genes.



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1. 28677.m000055_DELLA      ETGVRLVHTLLACAEAIQQDNFKLAEALLKHIG--LLAASQA-SSMRKVATYFAEALARRI
2. 29692.m000540_DELLA      ENGIRLVHLLMACAEAVQQNNLTLAEALVKQIG--FLAVSQA-GAMRKVATYFAEALARRI
3. 29807.m000482_DELLA      DSAIRLVHLLMTCAESIQRGDLSLAGSLVEDMQALLTRVNTN-SGIGKVAGCFIDALSLRI
4. 30170.m013590_DELLA      -TRVPLFNMLIACAEAVEENNLHLAEIILSQIL----VNSKA-RATQSMAALFAEAMSSRV
5. 30190.m011131_DLT        YQAYELVSLLTACVEAIGSKNMAVINHCIAKLG--ELSSPKG-TAVSRLIAYYTEALALRV
6. 29646.m001070_HAM        NFGFDLIQELIRAADCIDSSEIQLANVILDRLN-HRLQSPVG-KPLQRAAFFFKEALQNLL
7. 29820.m000985_HAM        SNLFSLTNLAMAYAEATENKQAALAEVIMRRIG--EKVSPIS-GIKERLLYYAFQPLDK--
8. 29820.m000986_HAM        DNRLTVLHLLKAYGEAMENQKTELAGVLIRCLR--EKVSLAG-EPLLRIAFSLSQDTEK--
9. 29908.m006159_HAM        FKGLRLIHLLMAAAEALTGVNKSRELARVILVRLKELVSPNDGTNMERLAAYFTDALQGLL
10. 29916.m000544_HAM       QHQHALLDQLYKAAELVGTGNFSHAQGILARLN--QQLSP-IGKPLHRAAFYFKEALQLLL
11. 30174.m008828_HAM       QLQQAIINPICQAAELIETGNPALAQGILARLN--HQLSLSIGKPHTRAAFYFKEALQLLL
12. 27568.m000253_LISCL     SNVVDLRTLLTLCAQAVAADDRRNTNDLLKQIR--QNASPTG-DGMQRMAHIFADGLEARM
13. 28650.m000186_LISCL     RDMMDLWTVLPQCAQAVANDDQTTAKELLRQIK--QYSSPFG-DGNQRLAHFFANGLEARL
14. 28650.m000187_LISCL     GEVVDLSTLLAQCAQSVSISDHRTATELLRQIR--QHSSPYG-DGNQRLAHYFANALETRL
15. 28650.m000189_LISCL     K-MFDLSTLLIQCAQATGTGDQRTAYQQLKLIR--LHASPYG-DANQRLAHYFANALEARL
16. 28650.m000190_LISCL     KETVDLRSLLILCAQAVSGNDFRTANELVKQIR--QHSSPLG-DGSQRLAHCFANGLEARL
17. 28650.m000191_LISCL     KEVVDLRTLLILCAQAVSSDDRRTANEILKQIR--QHSSPFG-DGSQRLAHCFANGLEARL
18. 29767.m000200_LISCL     KEVVDLRTLLISCAQAVAADDRRSAYEMLKQIR--QHSSPFG-DGNQRLAHCFANGLDARL
19. 29728.m000844_Os19      GKGLHLIHLLLITATAVDENNVATALENLSELY--TSVCLTG-DSVQRVVAYFADGLSARL
20. 29929.m004746_Os4       IDGMKLVQQLIACAEAVACRDKTHASALLSELR--ANALVFG-TSFQRVASCFVQGLSDRL
21. 30147.m013794_Os4       TDGMRLVQLLIACAEAVACRDKSHASALLSELR--SSALVFG-SSFQRVASCFFQGLADRL
22. 30169.m006306_Os4       DRGLHLVHLLLACAEAVGCRDTQLANSVLAQIW--ASVNPFG-DSLQRVSYCFALGLRSRL
23. 30131.m007029_Os43      DSGLQLVHLLLACAEAVAKEDYMLARKYLHHLN--RVVTPLG-DSMQRVASCFTEALSARL
24. 27529.m000047_PAT1      IPRLDTRQILFACAQAISDGDISRAAALMHVLE--QMVSVSG-EPIQRLGAYMLEGLRARV
25. 27613.m000642_PAT1      VSRRDLKEVLYACAQAIDSNDMLTVEWLMTELR--KMVSVSG-EPIQRLGAYMLEGLVARL
26. 28166.m001040_PAT1      IPPDNLKQLLIACAKALSENNINEFDRLIEKAR--AAVSISG-EPIQRLGAYLVEGLVARK
27. 29648.m001919_PAT1      LSPRAPKRLLLECANALAEDNIEAADALINELR--QMVSIQG-DPSSRIAAYMVEGLAARM
28. 29949.m000124_PAT1      ISRGDLKHVLIACAKAVSDNDLLMAQWLMDELR--QIVSVSG-EPIQRLGAYMLEGLVARL
29. 30169.m006225_PAT1      PLPNYSKHTLVEAASAIYDGKTEVASEILTRVS--QVSNPRG-NSEQRLMEYMSMALKSRL
30. 29889.m003281_Rc_GRAS   IKDVELSLLLLASAHRVGNRQFDHASKLLNLCD--FLSSNKG-NSVQRVVHYFTKALQDRI
31. 29889.m003282_Rc_GRAS   --------FFLASAEKVSNGKFDRASRLLEFCD--QSSSNAG-NPVQRVVYYFFGALRRRI
32. 29889.m003284_Rc_GRAS   SRNVELVELLLASAEKVGYQQFERASRLLNHCE--LLSSNIG-NPVQRVVYHFSEALKERI
33. 29889.m003285_Rc_GRAS   AKKVELAELLLLSAEKVGNQQYERASILLNQCD--RLSSSTG-NAVERVVHYFCKALRERI
34. 29910.m000940_Rc_GRAS   AKHVELAESLLASAERIGNQQYDSASRLLKQCD--SISSNTG-NPVQRVVYYFAEALHDRI
35. 30076.m004651_Rc_GRAS   TRDVELAHLLLAAAEKVGYQQFDRASRLLSRCE--WIASQRA-NPVQRVVYCFAEALRERI
36. 29790.m000809_SCL3      --GIRLIQLLLKCANDASSGNLHRADACLSEIS--ELSSVSG-DSMQRLAARFASALAIRL
37. 30024.m001746_SCL3      --GLYLIHLLLTCGNHVAAGSLENAEIALGQIS--QLASAEG-DTMQRIAAYFTEALAHRI
38. 30131.m007244_SCL3      --GLYLIHLLHACASHVAAGSVENANICLEHIS--HLASADG-DTMQRIAAYFTEALADRI
39. 29634.m002156_SCL4/7    IESAPALKALLECARLAESEPERAVKSLIKLRES---VCEHG-DPTERVAFYFTEALYSRL
40. 28492.m000479_SCR       EHGLNLISLLFECAVAISVDNLGEAHRMLLELT--QMASPYGPSCAERVVAYFAKAMASRV
41. 29872.m000537_SCR       STGLRLLGLLLQCAECVAMDNLDEAADLLPEIS--ELSSPFG-SSFERVGSYFAHALQARV
42. 30073.m002204_SCR       EEGLHLLTLLLQCAEAVSADNFEEANKMLLEIS--QLSTPYG-TSAQRVAAYFSEAMSARL
43. 29661.m000901_SHR       -DANCMEQLLVHCANAIESNDATLAQQILWVLN--NIAPPDG-DSNQRLTCAFLRALIARA
44. 29661.m000923_SHR       FSSRWATDILLETARAIADKNSARVQQLMWMLN--ELGSPYG-DIDKKLASYFLQALFSRM
45. 29706.m001281_SHR       KEGRWAEDLLNPCAAAVSTGNLSRVQHLLYVLH--ELASSTG-DANHRLAFYGLQALTHHL
46. 30156.m001710_SHR       LDGACIEKLLLHCASALESNDGTLAQQVMWVLN--NVASLVG-DPNQRLTSWFLRALISRA
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Figure S2. *Cont.*

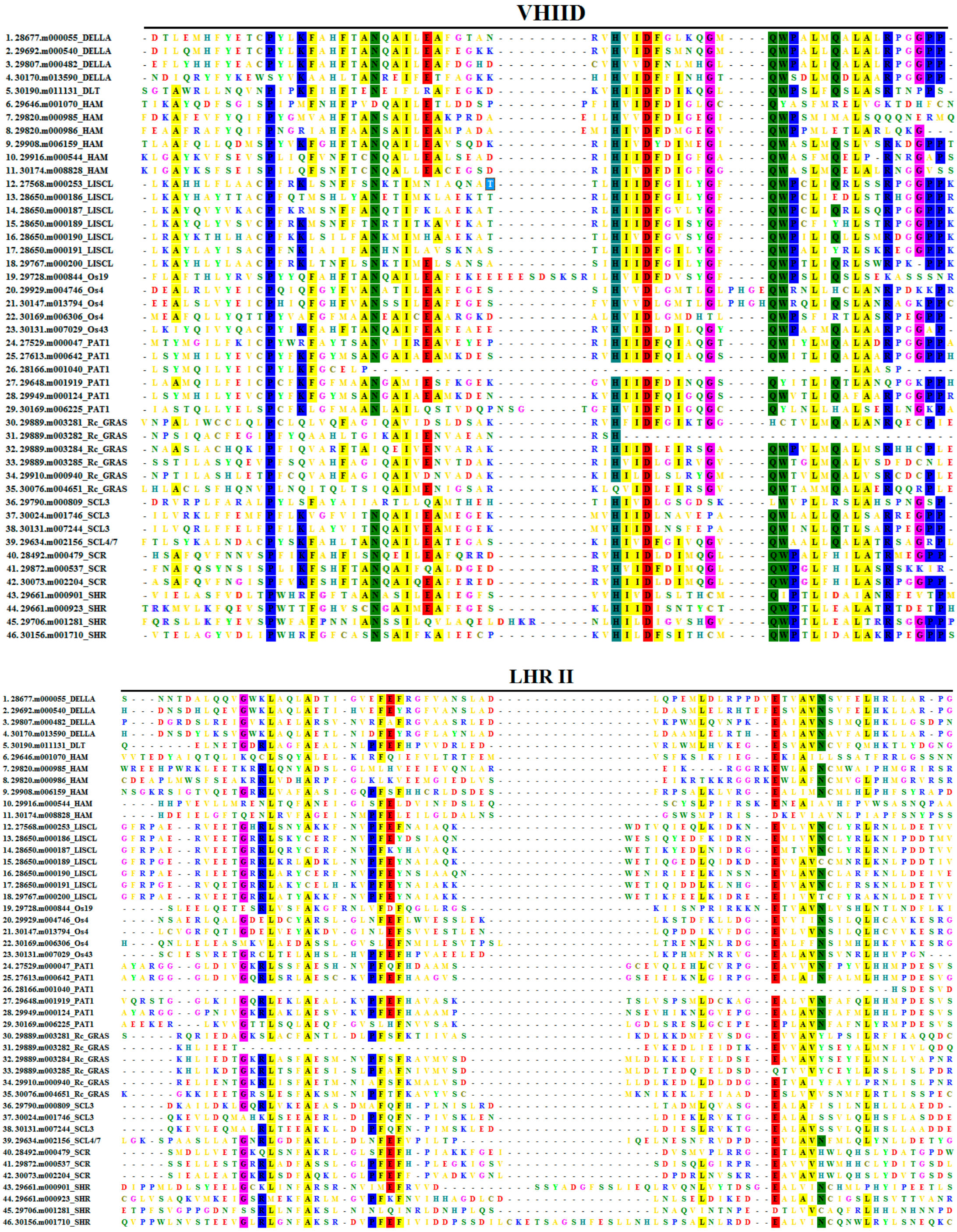


Figure S2. *Cont.*

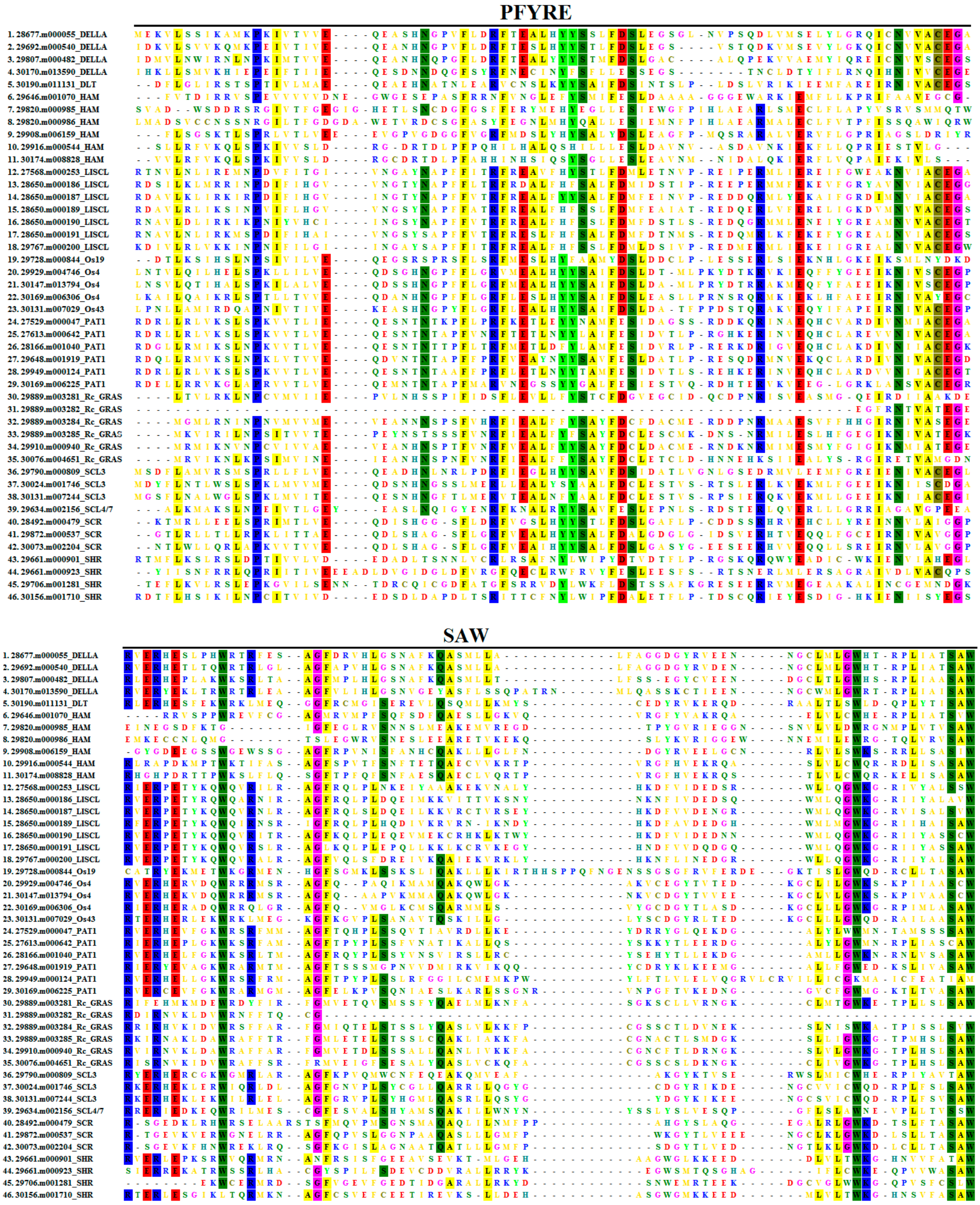


Figure S2. Multiple sequences alignment of amino acid of the conserved domains including LHR I, VHIID, LHR II, PFIYE and SAM in castor bean.

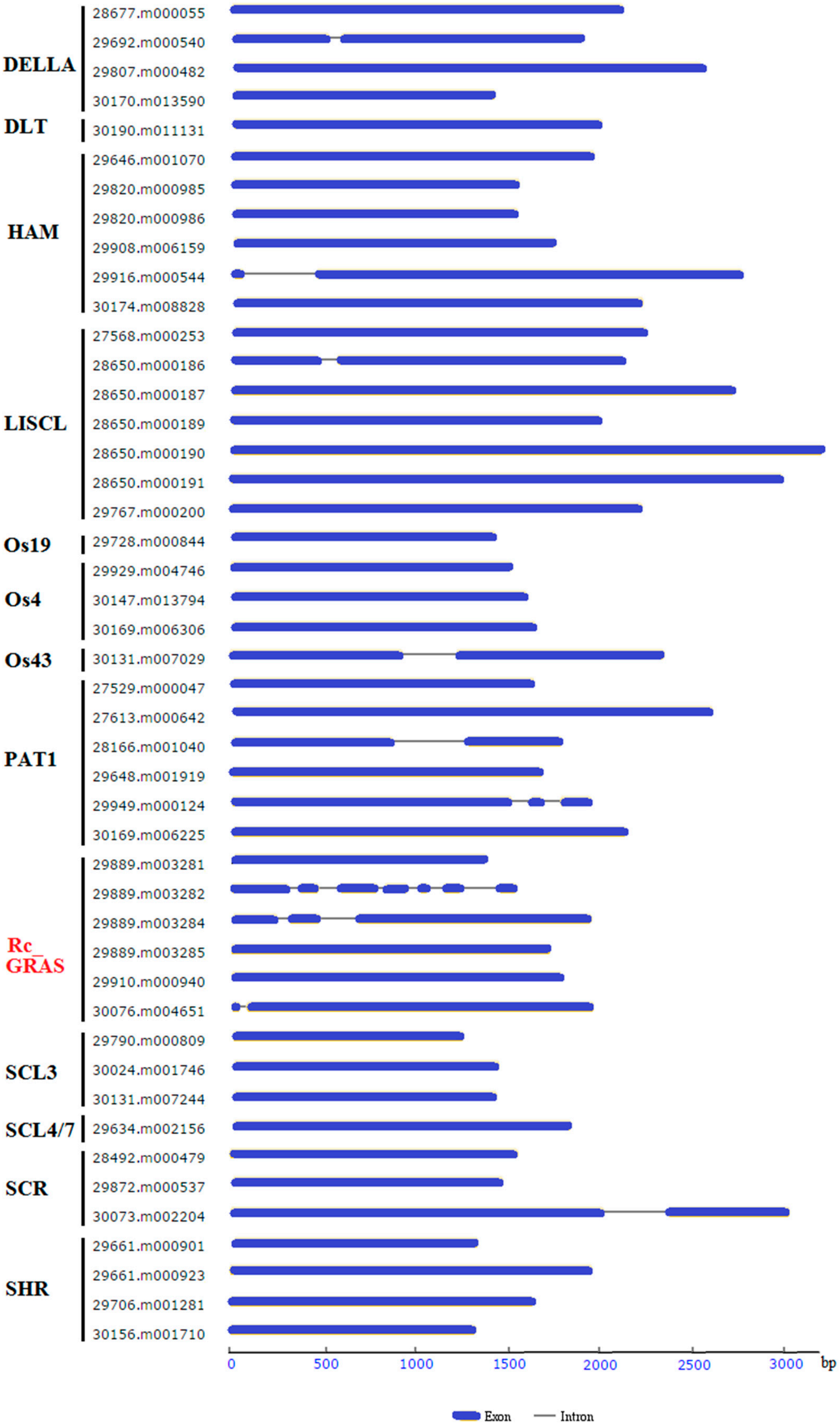


Figure S3. Gene structures of GRAS members in castor bean.

Table S1. The information of 48 GRAS transcription factors identified in castor bean genome.

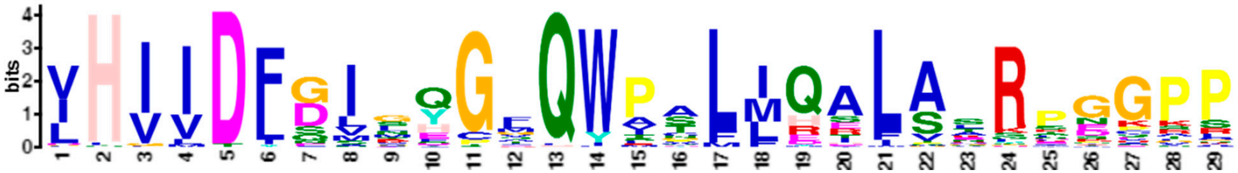
Gene Model	Scaffold	Gene Start	Gene End	Orientation	Domain Number	*E*-Value (Pfam)	CDS Length	Protein Length	Molecular Weight/Da	Theoretical pI	Reads Coverage (>10)	Homologs in *Arabidopsis*
27529.m000047	27529	20956	22584	+	1	1.00E-123	1629	542	61122.84	5.72	yes	AT4G17230.1
27568.m000253	27568	19777	22002	+	1	1.00E-120	2226	741	83116.30	5.37	yes	AT1G07530.1
27613.m000642	27613	218157	220737	-	1	2.70E-137	1617	538	60047.72	5.50	yes	AT1G50600.1
28166.m001040	28166	23949	25728	-	2	6.40E-17	1380	459	51523.05	6.25	yes	AT5G48150.1
28492.m000479	28492	123817	125376	-	1	7.10E-104	1560	519	58016.83	5.92	no	AT3G54220.1
28650.m000186	28650	27256	29354	-	1	2.30E-108	1992	663	75257.66	5.92	no	AT1G07530.1
28650.m000187	28650	31218	33926	-	1	2.80E-118	2067	688	78173.80	6.32	yes	AT1G07530.1
28650.m000189	28650	41918	43906	-	1	1.80E-112	1989	662	75340.73	6.16	no	AT1G07530.1
28650.m000190	28650	48435	51623	-	1	1.60E-113	2448	815	90986.60	5.17	yes	AT1G07530.1
28650.m000191	28650	57247	60227	-	1	6.90E-110	2295	764	85580.05	5.28	yes	AT1G07530.1
28677.m000055	28677	3350	5464	+	1	3.40E-36	1704	567	62550.40	5.14	yes	AT3G03450.1
28966.m000535	28966	125327	126678	-	1	4.10E-15	483	160	17305.22	5.88	no	AT1G55580.1
29634.m002156	29634	607639	609465	+	1	7.20E-109	1827	608	66887.21	4.96	yes	AT5G66770.1
29646.m001070	29646	113881	115836	-	1	4.80E-87	1620	539	60899.08	6.03	yes	AT4G36710.1
29648.m001919	29648	47547	49226	-	1	5.10E-136	1680	559	62597.52	4.89	yes	AT1G21450.1
29661.m000901	29661	20973	22295	-	1	1.60E-89	1323	440	49288.28	5.58	yes	AT3G49950.1
29661.m000923	29661	255682	257645	+	1	7.40E-104	1539	512	58194.98	5.87	yes	AT4G37650.1
29692.m000540*	29692	243910	245798	+	1	2.80E-37	1830	609	67287.91	5.73	yes	AT1G14920.1
29706.m001281	29706	78273	79919	-	1	4.20E-78	1647	548	60960.68	5.85	yes	AT3G13840.1
29728.m000844	29728	310370	311785	-	1	4.20E-89	1416	471	53630.99	6.17	no	AT3G54220.1
29767.m000200	29767	26535	28757	+	1	2.80E-112	2223	740	83933.94	8.40	yes	AT2G37650.1
29790.m000809	29790	48786	50036	-	1	4.30E-99	1251	416	46776.87	6.40	yes	AT1G50420.1
29807.m000482	29807	100421	102935	-	1	5.90E-32	1611	536	58616.68	5.27	yes	AT2G01570.1
29820.m000985	29820	38524	40077	-	1	2.90E-41	1554	517	59681.48	4.82	no	AT4G08250.1
29820.m000986	29820	44796	46325	+	1	8.90E-38	1530	509	57484.06	4.83	no	AT5G66770.1
29872.m000537	29872	117231	118693	-	1	8.40E-114	1329	442	48239.49	5.45	yes	AT5G41920.1
29889.m003281	29889	213307	214671	-	1	2.00E-72	1365	454	51417.81	8.39	no	AT3G03450.1
29889.m003282	29889	216102	217643	-	1	2.30E-10	1008	335	38304.95	5.10	no	AT3G03450.1
29889.m003284	29889	221800	223738	+	1	5.20E-87	1689	562	64012.76	5.50	no	AT1G66350.1
29889.m003285	29889	225519	227249	+	1	1.10E-82	1731	576	64817.84	5.34	no	AT5G17490.1
29908.m006159	29908	273013	274753	+	1	2.30E-99	1476	491	54282.82	5.64	yes	AT4G08250.1
29910.m000940	29910	353874	355658	-	1	3.40E-92	1785	594	67317.41	5.09	no	AT1G66350.1
29916.m000544*	29916	241112	243860	-	1	5.40E-94	2364	787	86369.68	6.32	yes	AT4G00150.1
29929.m004746	29929	1419600	1421123	+	1	2.00E-106	1524	507	56534.09	6.86	no	AT1G50420.1
29949.m000124*	29949	53044	54985	-	1	4.30E-123	1749	582	65343.70	6.30	yes	AT5G48150.1
29957.m001404	29957	285159	285539	-	1	4.60E-09	267	88	10096.76	10.21	no	AT2G01570.1
30024.m001746	30024	1148008	1149444	-	1	8.80E-138	1356	451	50679.56	6.38	yes	AT1G50420.1

Table S1. *Cont.*

Gene Model	Scaffold	Gene Start	Gene End	Orientation	Domain Number	*E*-Value (Pfam)	CDS Length	Protein Length	Molecular Weight/Da	Theoretical pI	Reads Coverage (>10)	Homologs in *Arabidopsis*
30073.m002204	30073	100179	103200	+	1	1.40E-124	2532	843	90820.90	6.11	yes	AT3G54220.1
30076.m004651	30076	1394867	1396826	+	1	1.00E-81	1929	642	73135.35	6.36	no	AT3G03450.1
30131.m007029	30131	1098698	1101046	-	1	2.10E-133	2061	686	75615.20	5.70	no	AT3G54220.1
30131.m007244	30131	2435990	2437414	-	1	2.30E-135	1425	474	53756.93	5.93	yes	AT1G50420.1
30147.m013794	30147	2621522	2623102	+	1	6.50E-111	1581	526	58433.45	5.78	no	AT1G66350.1
30156.m001710	30156	550167	551501	-	1	2.60E-86	1335	444	49717.52	5.13	no	AT3G49950.1
30169.m006225	30169	2156081	2158208	-	1	5.70E-111	1848	615	67440.71	6.16	yes	AT5G52510.1
30169.m006306	30169	395846	397483	+	1	1.30E-109	1638	545	61000.11	4.99	no	AT1G50420.1
30170.m013590	30170	584630	586045	-	1	2.80E-92	1416	471	53788.61	5.68	no	AT2G01570.1
30174.m008828	30174	547369	549570	-	1	2.20E-95	2202	733	80414.81	5.73	yes	AT4G00150.1
30190.m011131	30190	2053590	2055578	-	1	1.20E-127	1989	662	73717.04	5.70	yes	AT1G63100.1

Table S2. Summary of conserved motifs identified from the GRAS proteins in castor bean.

Motif 1



2.	27568.m000253_LISCL	475	4.85e-31	**IMNIAQNATT**	**LHIIDFGILYGFQWPCLIQRLSSRPGGPP**	**KLRITGIDFP**
1.	28677.m000055_DELLA	301	4.85e-31	**ILEAFGTANR**	**VHVIDFGLKQGMQWPALMQALALRPGGPP**	**AFRLTGIGPP**
25.	27613.m000642_PAT1	276	2.20e-29	**IAEAMKDESR**	**VHIIDFQIAQGSQWITLIQALAARPGGPP**	**HVRLTGIDDS**
2.	29692.m000540_DELLA	341	2.20e-29	**ILEAFEGKKR**	**VHVIDFSMNQGMQWPALLQALALRPGGPP**	**AFRLTGIGPP**
28.	29949.m000124_PAT1	285	4.44e-29	**IAEAMKDENK**	**VHIIDFQIGQGSQWVTLIQAFAARPGGPP**	**RIRITGIDDS**
14.	28650.m000187_LISCL	421	6.28e-29	**IFKLAEKATR**	**LHIIDFGVLYGFQWPCLIQRLSQRPGGPP**	**KLRITGIELP**
42.	30073.m002204_SCR	563	2.04e-28	**IQEAFEREDR**	**VHIIDLDIMQGLQWPGLFHILASRPGGPP**	**YVRLTGLGTS**
3.	29807.m000482_DELLA	255	3.34e-28	**ILEAFDGHDC**	**VHVVDFNLMHGLQWPALIQALALRPGGPP**	**LLRLTGIGPP**
15.	28650.m000189_LISCL	396	6.36e-28	**ITKAVEKATR**	**LHIIDFGISYGFQWPCFIYHLSTRPGGPP**	**KVRITGIDYP**
24.	27529.m000047_PAT1	280	8.73e-28	**IREAVEYEPR**	**IHIIDFQIAQGTQWIYLMQALADRPGGPP**	**AIRITGVDDP**
23.	30131.m007029_Os43	434	2.22e-27	**IFEAFEAEER**	**VHVIDLDILQGYQWPAFMQALAARPGGAP**	**FLRITGVGSC**
13.	28650.m000186_LISCL	396	2.22e-27	**IMKLAEKTTR**	**LHIIDFGILYGFQWPCLIEDLSTRHGGPP**	**RLHITGIEFP**

Table S2. *Cont.*

17.	28650.m000191_LISCL	499	4.07e-27	**ILAVSKNAST**	**LHIIDFGILYGFQWPALIYRLSKREGGPP**	**KLRITGIELP**
40.	28492.m000479_SCR	262	6.37e-27	**ILEAFQRRDR**	**VHIIDLDIMQGLQWPALFHILATRMEGPP**	**HIRMTGMGTS**
46.	30156.m001710_SHR	155	2.36e-26	**IFKAIEECPK**	**VHILDFSITHCMQWPTLIDALAKRPEGPP**	**SLRITVPFTR**
18.	29767.m000200_LISCL	476	3.61e-26	**IMELSANSAS**	**IHIIDFGILYGFQWPTLIQRLSWRPKPPK**	**VRITGIDFPQ**
5.	30190.m011131_DLT	391	3.22e-25	**FLRAFEGKDK**	**VHIIDFDIKQGLQWPSLFQSLASRTNPPS**	**HVRITGIGES**
4.	30170.m013590_DELLA	192	6.21e-25	**IFETFAGKKH**	**IHVIDFFINHGTQWSDLMQDLAARPGGPP**	**TIRISGIGFP**
27.	29648.m001919_PAT1	296	1.04e-24	**MIESFKGEKG**	**VHIIDFDINQGSQYITLIQTLANQPGKPP**	**HLRLTGIDDP**
39.	29634.m002156_SCL4/7	344	1.34e-24	**ILEATEGASK**	**IHIVDFGIVQGVQWAALLQALATRSAGRP**	**LSIRISGIPA**
16.	28650.m000190_LISCL	549	1.73e-24	**IMHAAEKATT**	**LHIVDFGVSYGFQWPILIQLLSMRDGGPP**	**KLRITGIELP**
9.	29908.m006159_HAM	220	6.79e-24	**ILEAVSQDKR**	**IHIVDYDIMEGIQWASLMQSLVSRKDGPP**	**TPHLRITALS**
11.	30174.m008828_HAM	481	8.66e-24	**LLEACEGSDR**	**IHIVDFDIGFGGQWASLMQELALRNGGVS**	**SLKITAFVSP**
41.	29872.m000537_SCR	188	2.24e-22	**IFQALDGEDR**	**VHVIDFDIMQGLQWPGLFHILASRSKKIR**	**SMRITGFGSS**
45.	29706.m001281_SHR	276	4.35e-22	**LAQELDHKRN**	**LHILDIGVSHGVQWPTLLEALTRRSGGPP**	**PLVRITVITA**
22.	30169.m006306_Os4	280	4.85e-22	**ICEAARGKDA**	**LHVIDLGMDHTLQWPSFIRTLASRPEGPP**	**KVRITGLIND**
29.	30169.m006225_PAT1	352	6.84e-21	**TVDQPNSGTG**	**FHVIDFDIGQGCQYLNLLHALSERLNGKP**	**ATVKITAVAD**
32.	29889.m003284_Rc_GRAS	303	7.57e-21	**IVENVARAKR**	**IHIIDLEIRSGAQWPVLMQALMSRHHCPL**	**ELLKISAIGT**
34.	29910.m000940_Rc_GRAS	325	1.39e-20	**IVDNVADAKK**	**IHILDLSLRYGMQWTVLMQALVSRCDCPL**	**EHLKITAIGT**
37.	30024.m001746_SCL3	136	2.08e-20	**IIEAMEGEKM**	**VHIIDLNAVEPAQWLALLQALSARREGPP**	**HLRITGIHQQ**
38.	30131.m007244_SCL3	156	2.30e-20	**IVEAMEGEKM**	**VHIIDLNSFEPAQWINLLQTLSARPEGPP**	**HLRITGIHEQ**
10.	29916.m000544_HAM	535	6.14e-20	**LLEALSEADR**	**IHIIDFDIGFGAQWASFMQELPRNRGAPS**	**LKITAFASPS**
44.	29661.m000923_SHR	235	8.21e-20	**IMEAFEGESK**	**LHIIDISNTYCTQWPTLLEALATRTDETP**	**HLRLTTIVAS**
19.	29728.m000844_Os19	198	3.11e-19	**EEESDSKSRI**	**LHVIDFDVSYGFQWPSLIQSLSEKASSSN**	**RISLRITGLG**
30.	29889.m003281_Rc_GRAS	180	1.36e-18	**VIDSLDSAKR**	**VHFIDFGIKTGGHCTVLMQALANRQECPI**	**ELLKISGVGV**
8.	29820.m000986_HAM	235	1.78e-18	**LEAMPADAEM**	**IHIVDFDMGEGVQWPPMLETLARLQKGVR**	**LTAIKWEQEN**
7.	29820.m000985_HAM	238	2.54e-18	**LEAKPRDAEI**	**LHVVDFDIGEGIQWPSMIMALSQQQNERM**	**QQHGYNQRHL**
43.	29661.m000901_SHR	146	2.78e-18	**ILEAIEGFSV**	**VHIVDLSLTHCMQIPTLIDAIANRFEVTP**	**MIKLTVAGCT**
33.	29889.m003285_Rc_GRAS	318	4.73e-18	**IVENVTDAKR**	**IHVIDLGIRVGVQWTGLMQALVSDFDCNL**	**ELLKITAVGT**
35.	30076.m004651_Rc_GRAS	370	8.71e-18	**IMENIGSARK**	**LQVIDLEIRSGVQWTAMMQALAERQQRPL**	**EHLKVTALGL**
6.	29646.m001070_HAM	279	1.51e-16	**LETLDDSPPF**	**IHVIDFDIGLGCQYASFMRELVGKTDHFC**	**NKLTSPVLRI**
21.	30147.m013794_Os4	271	1.19e-15	**FEGESFVHVV**	**DLGMTLGLPHGHQWRQLIQSLANRAGKPP**	**CRLRITAVGL**
36.	29790.m000809_SCL3	144	5.48e-15	**LLQAMTHEHT**	**IHIVDLGSGDSKLWVPLLRSLAHSPNGSP**	**HLKFTCLNTD**
20.	29929.m004746_Os4	251	8.57e-15	**FEGESSIHVV**	**DLGMTLGLPHGEQWRNLLHCLANRPDKKP**	**RCLRITGVGN**

Table S2. *Cont.*

Motif 2

28.	29949.m000124_PAT1	466	1.49e-34	**RINVEQHCLA**	**RDVVNIIACEGTERVERHELLGKWRSRFRMAGFTP**	**YPLSSLRFGG**
12.	27568.m000253_LISCL	656	3.35e-34	**RMLIEREIFG**	**WEAKNVIACEGAERIERPETYKQWQVRILRAGFRQ**	**LPLNKEIYAA**
25.	27613.m000642_PAT1	457	6.32e-34	**RINVEQHCLA**	**REVVNIVACEGAERIERHEPLGKWKSRFAMAGFTP**	**YPLSSFVNAT**
18.	29767.m000200_LISCL	656	6.32e-34	**RMLIEKEIIG**	**REALNVVACEGWERVERPETYKQWQVRALRAGFVQ**	**LSFDREIVKQ**
26.	28166.m001040_PAT1	378	2.51e-33	**RIGVEQHCLA**	**KDIVNIIACEGKERVERHELFGKWKSRLTMAGFRQ**	**YPLSSYVNSV**
2.	29692.m000540_DELLA	516	2.92e-33	**DKVMSEVYLG**	**KQICNVVACEGADRVERHETLTQWRTRLGLAGFAP**	**VHLGSNAFKQ**
27.	29648.m001919_PAT1	477	2.93e-32	**RMNVEKQCLA**	**RDIVNIVACEGDERIERYEVAGKWRARMTMAGFTS**	**SSMGPNVVDM**
13.	28650.m000186_LISCL	577	1.31e-31	**RMMFEKEVFG**	**RYAVNVIACEGGERVERPETYRQWQARNIRAGFRQ**	**LPLDQEIMKK**
17.	28650.m000191_LISCL	680	3.30e-31	**RLKFEKEFYG**	**REALNVIACEGSERVERPETYKQWQVRSLRAGLKQ**	**LPLEPQLLKK**
20.	29929.m004746_Os4	424	4.28e-31	**RVKIEQFFYG**	**EEIKNIVSCEGPARVERHERVDQWRRRMSRAGFQP**	**AQIKMAMQAK**
21.	30147.m013794_Os4	444	1.53e-30	**RAKMEQFYFA**	**EEIKNIVSCEGPARVERHEKVDQWRRRMSRAGFQA**	**APVKMMAQAK**
36.	29790.m000809_SCL3	334	2.22e-30	**DRMVLEEMFG**	**REIENIVACEGLERYERHERCGKWGMRLARAGFKP**	**VQMWCNFEQE**
15.	28650.m000189_LISCL	577	4.11e-30	**RLVFERELIG**	**KDVMNVVACEGSERFERPETYKQWQIRNSRIGFRQ**	**LPLHQDIVKR**
1.	28677.m000055_DELLA	479	9.56e-30	**DLVMSELYLG**	**RQICNVVACEGAHRVERHESLPHWRTRFESAGFDR**	**VHLGSNAFKQ**
3.	29807.m000482_DELLA	432	1.72e-28	**EKVVAEMYIQ**	**REICNVVSCEGSARLERHEPLAKWKSRLTAAGFMP**	**LHLGSNAFKQ**
38.	30131.m007244_SCL3	387	2.15e-28	**RQKVEKMLLG**	**EEIKNIIACEGIERKERHEKLEKWILRLELAGFGR**	**VPLSYHGMLQ**
5.	30190.m011131_DLT	563	1.11e-27	**VRIKIEEMFA**	**REIRNIVACEGSDRLERHESFEKWRKLMEQGGFRC**	**MGISEREVLQ**
29.	30169.m006225_PAT1	531	4.88e-27	**ERVKVEEGLG**	**RKLANSVACEGRDRVERCEVFGKWRARMGMAGFEL**	**KPVSQNIAES**
23.	30131.m007029_Os43	603	1.37e-26	**RAKVEQYIFA**	**PEIRNIVACEGPERTERHERLEKWRKLMEGKGFKG**	**VPLSANAVTQ**
37.	30024.m001746_SCL3	366	1.86e-26	**RLKVEKMLFG**	**EEIKNIISCDGAERKERHEKLERWIQRLDLAGFGN**	**VPLSYCGLLQ**
22.	30169.m006306_Os4	458	2.52e-26	**RMKIEKLHFA**	**EEIRNIVAYEGCDRIERHERADQWRRQLGRAGFQV**	**MGLKCMSQAR**
4.	30170.m013590_DELLA	362	3.95e-25	**NCLDTYIFLR**	**NQIHNIVVCEGEYRVERYEKLTRWRTRLEAAGFVL**	**IHLGSNVGEY**
43.	29661.m000901_SHR	357	1.67e-21	**QRQWYEADIC**	**WKIENVIAHEGLQRVERLEPKSRWVQRMRNANFRS**	**ISFGEEAVSE**
34.	29910.m000940_Rc_GRAS	499	2.83e-20	**RMIMESMYFG**	**IGIKNMIATEGEERVIRNVKLDAWRAFFARFGMVE**	**TDLSSSALLQ**
32.	29889.m003284_Rc_GRAS	477	4.54e-20	**RMAAESVFFH**	**HGIRNIVASEGEERRIRHVKIDVWRSFFARFGMIQ**	**TELSTSSLYQ**
33.	29889.m003285_Rc_GRAS	491	8.47e-20	**RMILESLHFG**	**EGIKNIVATEGKERKIRNAKLDAWRAFFTRFGMLE**	**TELSTSSLCQ**
46.	30156.m001710_SHR	357	1.69e-19	**QRIEYESDIG**	**HKIENIISYEGSQRTERLESGIKLTQRMKNAGFCS**	**VEFCEETIRE**
44.	29661.m000923_SHR	429	4.22e-19	**ERLMLERSAG**	**RAIVDLVACQPSESIERREKATRWSSRLHACGYSP**	**ILFSDEVCDD**

Table S2. *Cont.*

Motif 3						
						
21.	30147.m013794_Os4	396	4.50e-30	**LSPKILALVE**	**QDSSHNGPFFLGRFMEALHYYSAIFDSLD**	**AMLPRYDTRR**
22.	30169.m006306_Os4	409	6.89e-29	**LSPTLLTVVE**	**QDANHNGPFFLGRFLESLHYYSAIFDSLE**	**ASLLPRNSRQ**
2.	29692.m000540_DELLA	471	1.51e-28	**MKPEIVTIVE**	**QEANHNGPVFLDRFTESLHYYSTLFDSLE**	**GSVSTQDKVM**
1.	28677.m000055_DELLA	431	1.51e-28	**MKPKIVTVVE**	**QEASHNGPVFLDRFTEALHYYSSLFDSLE**	**GSGLNVPSQD**
34.	29910.m000940_Rc_GRAS	451	2.68e-28	**VNPCVIVVAE**	**VEANHNSPTFVNRFVEALFYYSAYFDCLD**	**ACMERNDKNR**
20.	29929.m004746_Os4	376	1.41e-27	**LSPKLLILVE**	**QDSGHNGPFFLGRVMEALHYYSAIFDSLD**	**TMLPKYDTKR**
14.	28650.m000187_LISCL	554	2.85e-27	**IRPDIFIHGV**	**INGTYNAPFFVTRFREALFYYSALFDMFE**	**INVPREDDQR**
3.	29807.m000482_DELLA	387	1.32e-26	**LNPKIMTVVE**	**QEANHNQPGFLDRFTEALYYYSTMFDSLG**	**ACALQPEKVV**
35.	30076.m004651_Rc_GRAS	497	2.55e-26	**LKPSIMVINE**	**IEANHNSPNFVNRFIEALFFYSAYFDCLE**	**TCLDHNNEHK**
23.	30131.m007029_Os43	555	4.86e-26	**QAPNIVTIVE**	**KEASHNGPYFLGRFLEALHYYSAIFDSLD**	**ATFPPDSTQR**
16.	28650.m000190_LISCL	683	2.09e-24	**IKPNIYVHCI**	**INGSYNAPFFVTRFREALFHFSSLFDMFD**	**STLSREDQGR**
13.	28650.m000186_LISCL	529	2.40e-24	**INPDIFIHGV**	**VNGTYNAPFFLTRFRDALFHFSALFDMID**	**STIPREEPER**
25.	27613.m000642_PAT1	409	6.38e-24	**LSPKVVTLVE**	**QESNTNTAPFVNRFTETLNYYLAIFESID**	**VTLPRGHKER**
32.	29889.m003284_Rc_GRAS	429	7.32e-24	**INPNVMVVME**	**VEANNNSPSFVHRFIEALFFYSAYFDCFD**	**ACMERDDPNR**
27.	29648.m001919_PAT1	429	7.32e-24	**LNPKLVTVVE**	**QDVNTNTAPFFPRFVEAYNYYSAVFESLD**	**ATLPRESQDR**
15.	28650.m000189_LISCL	529	1.44e-23	**INPVIFLHGV**	**VNGSYNAPFFATRFREALFHFSSLFDMFE**	**AIATREDQER**
12.	27568.m000253_LISCL	608	1.44e-23	**MNPDVFITGI**	**VNGAYNAPFFITRFREAVFHYSTLFDMLE**	**TNVPREIPER**
28.	29949.m000124_PAT1	418	9.01e-23	**LSPKVVTLVE**	**QESNTNTAAFFPRFLETLNYYTAMFESID**	**VTLSREHKER**
24.	27529.m000047_PAT1	413	9.01e-23	**LSPKVVTLIE**	**QESNTNTKPFLPRFKETLEYYNAMFESID**	**AGSSRDDKQR**
17.	28650.m000191_LISCL	632	9.01e-23	**MSPDIFIHAI**	**VNGSYSAPFFVTRFRESLFHFSALFDMFD**	**TNMSREDQMR**
26.	28166.m001040_PAT1	330	1.92e-22	**LNPKVVTLVE**	**QESNTNTTPFLTRFMETLDFYLAMFESID**	**VRLPRERKDR**
18.	29767.m000200_LISCL	608	6.54e-22	**INPNIFILGI**	**INGAYSAPFFITRFREALFHFSSLFDMLD**	**SIVPREDMER**
33.	29889.m003285_Rc_GRAS	444	7.55e-21	**LNPSITVVTE**	**PEYNSTSSSFVNRFIEALFYFSAYFDCLE**	**SCMKDNSNRM**
42.	30073.m002204_SCR	683	1.18e-20	**RLAPKVVTVV**	**EQDLSHAGSFLGRFVEAIHYYSALFDSLG**	**ASYGEESEER**
41.	29872.m000537_SCR	309	1.18e-20	**LLRPKLITTA**	**EQDLSHAGSFLGRFVEALHYYSALFDALG**	**DGLGIDSVER**
38.	30131.m007244_SCL3	339	2.05e-20	**LSPKLMVITE**	**QESNHNGFTLMERVTEALNFYAALFDCLE**	**STVSRPSIER**
36.	29790.m000809_SCL3	285	2.05e-20	**MSPRLLFLVE**	**QEADHNLNRLPDRFIEGLHYYSAVFDSID**	**ATLVGNLGSE**

Table S2. *Cont.*

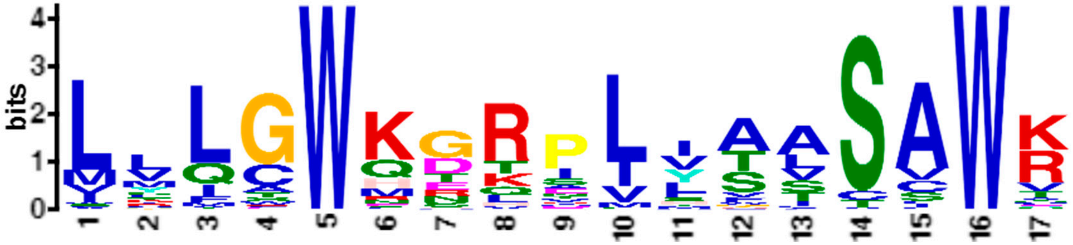
37.	30024.m001746_SCL3	318	7.14e-19	**LSPKLMVVME**	**QDSNHNGSSLMERLLEALYSYAALFDCLE**	**STVSRTSLER**
40.	28492.m000479_SCR	382	1.17e-18	**ELSPRIMTLV**	**EQDISHGGSFLDRFVGSLHYYSTLFDSLG**	**AFLPCDDSSR**
19.	29728.m000844_Os19	322	1.17e-18	**LNPSIVILVE**	**QEGSRSPRSFLSRFMESLHYFAAMYDSLD**	**DCLPLESSER**
39.	29634.m002156_SCL4/7	475	1.43e-18	**LNPEIVTLGE**	**YEASLNQIGYENRFKNALRYYSAVFESLE**	**PNLSRDSTER**
29.	30169.m006225_PAT1	484	7.25e-18	**LAPRVVTLVE**	**QEMNTNTAPFMARVNEGSSYYGALFESIE**	**STVQRDHTER**
5.	30190.m011131_DLT	516	1.83e-17	**TSPTIVLMAE**	**QEAEHNATNLEARVCNSLKYYSAIFDSIN**	**TSLPLDSLVR**
9.	29908.m006159_HAM	355	2.88e-17	**SPRLVTLVEE**	**EVGPVGDGGFVGRFMDSLYHYSALYDSLE**	**AGFPMQSRAR**
4.	30170.m013590_DELLA	320	3.07e-15	**IEPEIFTIIE**	**QESDNNDQGFSYRFNECINYFSFLLESSE**	**GSTNCLDTYI**
6.	29646.m001070_HAM	414	1.04e-12	**PEVVVVVDNE**	**GWGESEPASFRRNFVNGLEFYSMIFESLD**	**AAAAGGGEWA**
30.	29889.m003281_Rc_GRAS	307	1.19e-12	**LNPCVMVIIE**	**PVLNHSSPIFIDSFLEVLLFYSTCFDGVE**	**GCIDQCDPNR**
44.	29661.m000923_SHR	382	4.24e-12	**IITIVEEEAD**	**LDVGIDGLDFVRGFQECLRWFRVYFESLE**	**ESFSRTSNER**
46.	30156.m001710_SHR	310	1.19e-11	**LNPCITVIVD**	**EDSDLDAPDLTSRITTCFNYLWIPFDALE**	**TFLPTDSCQR**
8.	29820.m000986_HAM	381	1.19e-11	**GILTFGDGDA**	**WETVRDCSGFASYFEGNLMHYQALLESIE**	**MNFPIHLAEA**
11.	30174.m008828_HAM	607	1.97e-11	**LSPKIVVSLD**	**RGCDRTDLPFAHHINHSIQSYSGLLESLE**	**AVNMNIDALQ**
43.	29661.m000901_SHR	310	6.37e-11	**LDPTIVVLVD**	**EDADLTSNNLVCRLRSAFNYLWIPYDTVD**	**TFLPRGSKQR**
7.	29820.m000985_HAM	389	1.97e-10	**GIVTFGEGIG**	**HETLSNCDGFGSFFERYMEHYEGLLESIE**	**WGFPIHLAEA**
Motif 4						
						
2.	29692.m000540_DELLA	311	7.94e-34	**IDHSLSDILQ**	**MHFYETCPYLKFAHFTANQAILEAFEGKK**	**RVHVIDFSMN**
3.	29807.m000482_DELLA	225	3.83e-31	**ASAYENEFLY**	**HHFYEACPYLKFAHFTANQAILEAFDGHD**	**CVHVVDFNLM**
1.	28677.m000055_DELLA	271	4.98e-30	**LDPSYSDTLE**	**MHFYETCPYLKFAHFTANQAILEAFGTAN**	**RVHVIDFGLK**
23.	30131.m007029_Os43	404	1.81e-26	**SNSMEILKIY**	**QIVYQACPYIKFAHFTANQAIFEAFEAEE**	**RVHVIDLDIL**
39.	29634.m002156_SCL4/7	314	2.64e-25	**SSEEDFTLSY**	**KALNDACPYSKFAHLTANQAILEATEGAS**	**KIHIVDFGIV**
28.	29949.m000124_PAT1	255	1.10e-24	**PASADLLSYM**	**HILYEVCPYFKFGYMSANGAIAEAMKDEN**	**KVHIIDFQIG**
19.	29728.m000844_Os19	159	1.50e-24	**PTSEEEFLAF**	**THLYRVSPYYQFAHFTANQAILEAFEKEE**	**EEESDSKSRI**
25.	27613.m000642_PAT1	246	2.04e-24	**PASAELLSYM**	**HILYEVCPYFKFGYMSANGAIAEAMKDES**	**RVHIIDFQIA**
42.	30073.m002204_SCR	533	9.18e-24	**THTQKMASAF**	**QVFNGISPFVKFSHFTANQAIQEAFERED**	**RVHIIDLDIM**
9.	29908.m006159_HAM	190	3.39e-23	**HHQADTLAAF**	**QLLQDMSPYVKFGHFTANQAILEAVSQDK**	**RIHIVDYDIM**

Table S2. *Cont.*

20.	29929.m004746_Os4	217	6.99e-21	**SFTAEKDEAL**	**RLVYEICPQIQFGYFVANATILEAFEGES**	**SIHVVDLGMT**
41.	29872.m000537_SCR	158	7.92e-21	**TQSQKIFNAF**	**QSYNSISPLIKFSHFTANQAIFQALDGED**	**RVHVIDFDIM**
21.	30147.m013794_Os4	237	1.15e-20	**IASDKKEEAL**	**SLVYEICPHIQFGHFVANSSILEAFEGES**	**FVHVVDLGMT**
27.	29648.m001919_PAT1	266	2.39e-20	**PPSSDRLAAM**	**QILFEICPCFKFGFMAANGAMIESFKGEK**	**GVHIIDFDIN**
38.	30131.m007244_SCL3	126	5.51e-20	**YLVSEEILVQ**	**RLFFELFPFLKLAYVITNQAIVEAMEGEK**	**MVHIIDLNSF**
40.	28492.m000479_SCR	232	8.83e-20	**INHKTVHSAF**	**QVFNNVSPFIKFAHFISNQEILEAFQRRD**	**RVHIIDLDIM**
37.	30024.m001746_SCL3	106	9.92e-20	**TLVSEEILVR**	**KLFFEMFPFLKVGFVITNQAIIEAMEGEK**	**MVHIIDLNAV**
11.	30174.m008828_HAM	451	3.92e-19	**CNLILKIGAY**	**KSFSEISPILQFSNFTCNQALLEACEGSD**	**RIHIVDFDIG**
44.	29661.m000923_SHR	205	7.66e-19	**CSFESTRKMV**	**LKFQEVSPWTTFGHVSCNGAIMEAFEGES**	**KLHIIDISNT**
22.	30169.m006306_Os4	250	1.33e-18	**ITREEKMEAF**	**QLLYQTTPYVAFGFMAANEAICEAARGKD**	**ALHVIDLGMD**
7.	29820.m000985_HAM	207	7.33e-18	**ESFKNFDKAF**	**EVFYQIFPYGMVAHFTANSAILEAKPRDA**	**EILHVVDFDI**
10.	29916.m000544_HAM	505	8.13e-18	**FDVIFKLGAY**	**KVFSEVSPLIQFVNFTCNQALLEALSEAD**	**RIHIIDFDIG**
14.	28650.m000187_LISCL	391	1.11e-17	**TPVSDILKAY**	**QVYVKACPFKRMSNFFANQTIFKLAEKAT**	**RLHIIDFGVL**
15.	28650.m000189_LISCL	366	3.08e-17	**TNTADILKAY**	**QLYVSVCPFRKMSNFFTNRTITKAVEKAT**	**RLHIIDFGIS**
8.	29820.m000986_HAM	204	6.82e-17	**ESSNNFEAAF**	**RAFYQIFPNGRIAHFAANSAILEAMPADA**	**EMIHIVDFDM**
24.	27529.m000047_PAT1	250	1.80e-16	**PVSSDLMTYM**	**GILFKICPYWRFAYTSANVIIREAVEYEP**	**RIHIIDFQIA**
16.	28650.m000190_LISCL	519	5.61e-16	**RTAADILRAY**	**KTHLHACPFKKLSILFANKMIMHAAEKAT**	**TLHIVDFGVS**
29.	30169.m006225_PAT1	318	7.41e-16	**LFAKEHIAST**	**QLLYELSPCFKLGFMAANLAILQSTVDQP**	**NSGTGFHVID**
43.	29661.m000901_SHR	116	1.07e-15	**DAHKFSVIEL**	**ASFVDLTPWHRFGFTAANASILEAIEGFS**	**VVHIVDLSLT**
4.	30170.m013590_DELLA	162	2.65e-15	**FDYSYLNDIQ**	**RYFYKEWSYVKAAHLTANREIFETFAGKK**	**HIHVIDFFIN**
12.	27568.m000253_LISCL	445	5.37e-15	**TTAADVLKAH**	**HLFLAACPFRKLSNFFSNKTIMNIAQNAT**	**TLHIIDFGIL**
5.	30190.m011131_DLT	361	5.37e-15	**RVDDDSGTAW**	**RLLNQVNPIPKFIHFTENEIFLRAFEGKD**	**KVHIIDFDIK**
33.	29889.m003285_Rc_GRAS	288	8.30e-15	**EAIMAPSSTI**	**LASYQEVPFSQVAHFAGIQAIVENVTDAK**	**RIHVIDLGIR**
31.	29889.m003282_Rc_GRAS	220	2.13e-14	**SLVIIPNPSI**	**QACFEGIPFYQAAHLTGIKAIIENVAEAN**	**RSHLLKITAV**
32.	29889.m003284_Rc_GRAS	273	3.51e-14	**PVDPNHNAAS**	**LACHQKIPFIQVARFTAIQEIVENVARAK**	**RIHIIDLEIR**
45.	29706.m001281_SHR	242	3.82e-14	**IDPKFFQRSL**	**LKFYEVSPWFAFPNNIANSSILQVLAQEL**	**DHKRNLHILD**
13.	28650.m000186_LISCL	366	8.00e-14	**TSAAGMLKAY**	**HAYTTACPFQTMSHLYANETIMKLAEKTT**	**RLHIIDFGIL**
18.	29767.m000200_LISCL	446	9.41e-14	**TSAANVLKAY**	**HLYLAACPFRKLTNFLSNKTIMELSANSA**	**SIHIIDFGIL**
17.	28650.m000191_LISCL	469	1.79e-13	**LSAADMLKAY**	**LAYISACPFNKIAIIFANHNILAVSKNAS**	**TLHIIDFGIL**
46.	30156.m001710_SHR	125	2.65e-13	**QRRQMSVTEL**	**AGYVDLIPWHRFGFCASNSAIFKAIEECP**	**KVHILDFSIT**
34.	29910.m000940_Rc_GRAS	295	2.87e-13	**EAMMTPNPTI**	**LASHLETPFCQVAHFAGIQAIVDNVADAK**	**KIHILDLSLR**
6.	29646.m001070_HAM	248	1.06e-12	**SEVVQTIKAY**	**QDFSGISPIPMFNHFPVDQAILETLDDSP**	**PFIHVIDFDI**
35.	30076.m004651_Rc_GRAS	340	4.06e-11	**PDGTSLHLAC**	**LSFHQNVPLNQITQLTSIQAIMENIGSAR**	**KLQVIDLEIR**

Table S2. *Cont.*

Motif 5



2.	29692.m000540_DELLA	583	5.23e-18	GYRVDENNGC	LMLGWHTRPLIATSAWR	LASKQVVLAQ
18.	29767.m000200_LISCL	722	1.79e-17	NFLINEDGRW	LLQGWKGRIIYALSAWK	PM
34.	29910.m000940_Rc_GRAS	566	3.86e-17	CFTLDRNGKS	LVLGWKGTPLHSLSAWK	FISHEKKGVN
21.	30147.m013794_Os4	509	1.90e-16	GYTVVEEKGC	LVLGWKSKPIVAASCWK	C
1.	28677.m000055_DELLA	546	1.90e-16	GYRVEENNGC	LMLGWHTRPLIATSAWQ	LSDSK
25.	27613.m000642_PAT1	522	2.24e-16	KYTLEERDGA	LYLGWMNRPLIASCAWR	
6.	29646.m001070_HAM	522	3.12e-16	GFYVAKRQAE	LVLCWHERPLIATSVWK	C
22.	30169.m006306_Os4	522	3.66e-16	GYTLASDKGC	LLLGWKGRPIMLASAWK	AHNVPSS
17.	28650.m000191_LISCL	746	6.88e-16	DFVVDQDGQW	MLQGWKGRIIYASSAWV	PA
20.	29929.m004746_Os4	489	9.35e-16	GYTVTEDKGC	LILGWKSKPIIAASCWK	CC
23.	30131.m007029_Os43	669	1.09e-15	GYRLTEDKGC	LLLGWQDRAILAASAWR	C
15.	28650.m000189_LISCL	642	1.96e-15	DFAVDEDGHW	MLMGWKGRIIHAISAWK	PIEE
10.	29916.m000544_HAM	770	1.96e-15	GFHVEKRQAS	LVLCWQRRDLISASAWR	C
16.	28650.m000190_LISCL	797	2.27e-15	DFVIDEDNNW	MLQGWKGRIIYASSCWV	PA
33.	29889.m003285_Rc_GRAS	558	3.01e-15	ACTLSMDGKS	LLIGWKGTPMHSLSAWK	FI
4.	30170.m013590_DELLA	435	3.01e-15	KCTIEENNGC	WMLGWRTRPLIAISAWR	ADNRILISDE
3.	29807.m000482_DELLA	498	3.01e-15	GYCVEENDGC	LTLGWHSRPLIAASAWQ	AVPDIGSPLG
11.	30174.m008828_HAM	716	5.24e-15	GFHVEKRQST	LVLCWQRKELISASAWR	C
42.	30073.m002204_SCR	796	6.87e-15	GYTLVEDNGT	LKLGWKDLCLLTASAWR	PFHATATAAA
41.	29872.m000537_SCR	423	7.86e-15	YTLVEEENGC	LKLGWKDLSLLTASAWK	PSD
37.	30024.m001746_SCL3	432	1.02e-14	GYRIKDENGC	VVICWQDRPLFSLSAWR	CKK
35.	30076.m004651_Rc_GRAS	611	1.33e-14	SCSLDKNGKC	LIVGWKGTPLHSLSAWK	FCGDRLGRFF
26.	28166.m001040_PAT1	443	1.33e-14	HYTLLEKDGA	MLLGWKNRNLVSASAWY	
19.	29728.m000844_Os19	453	1.33e-14	RVFERDEGKT	ISLGWQDRCLLTASAWR	CV

Table S2. *Cont.*

36.	29790.m000809_SCL3	399	1.71e-14	**GYKTVSERWS**	**LMICWHERPIYAVTAWT**	**C**
44.	29661.m000923_SHR	495	2.21e-14	**WSMTQSGHAG**	**IFLCWKEQPVVWASAWK**	**P**
40.	28492.m000479_SCR	498	3.20e-14	**GYSLAQGEGA**	**LRLGWKDTSLFTASAWT**	**SLASR**
13.	28650.m000186_LISCL	643	4.60e-14	**NFIVDEDSQW**	**MLQGWKGRIIYALAVWK**	**PVHD**
38.	30131.m007244_SCL3	453	5.18e-14	**GYKIKEENGC**	**SVICWQDRPLFSVSAWR**	**FRRYD**
14.	28650.m000187_LISCL	668	6.56e-14	**DFVVDENGRW**	**MLQGWKGRVISALSVWK**	**PVQD**
12.	27568.m000253_LISCL	722	1.04e-13	**DFVIDEDSRW**	**LLQGWKGRIVYALSSWE**	**PDH**
27.	29648.m001919_PAT1	543	2.54e-13	**RYKLKEEMGA**	**LLFGWEDKSLIVASAWR**	
30.	29889.m003281_Rc_GRAS	421	4.83e-13	**SCLLVRNGKC**	**LMTGWKETPLLSLSAWN**	**FQQEHSKKNC**
29.	30169.m006225_PAT1	599	1.63e-12	**GFTVKEDNGG**	**VCFGWMGKTLTVASAWR**	
24.	27529.m000047_PAT1	526	3.85e-12	**RYGLQEKDGA**	**LYLWWMNTAMSSSSAWR**	
43.	29661.m000901_SHR	422	6.69e-12	**GWGLKKEEDD**	**LVLTWKGHNVVFATAWM**	**PT**
5.	30190.m011131_DLT	631	7.32e-12	**RVKERQDRAA**	**LTLSWLDQPLYTISAWA**	**PVDVVGSSSS**
9.	29908.m006159_HAM	467	8.01e-12	**YRVEELGCNR**	**LVLSWKSRRLLSASIWT**	**SPSSDCDL**
39.	29634.m002156_SCL4/7	592	2.09e-11	**YSLVESQPGF**	**LSLAWNEVPLLTVSSWR**	
46.	30156.m001710_SHR	422	2.70e-11	**GWGMKKEEDM**	**LVLTWKGHNSVFASAWL**	**PSCLED**
8.	29820.m000986_HAM	492	3.76e-11	**VRIGGEWNNE**	**MILEWRGTQLVRVSAWR**	**N**
45.	29706.m001281_SHR	524	7.18e-11	**EMRTEEKDGC**	**VGLWWKGQPVSFCSLWR**	**LDMKGNDS**
32.	29889.m003284_Rc_GRAS	544	9.11e-11	**SCTLDVNEKS**	**LNISWKATPISSLSVWK**	**FI**

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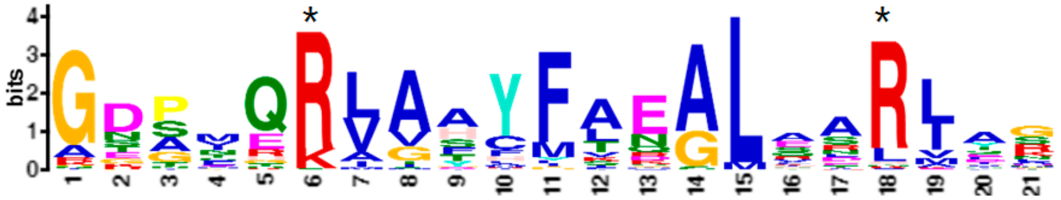

15.	28650.m000189_LISCL	322	8.57e-22	**KLIRLHASPY**	**GDANQRLAHYFANALEARLAG**	**SGKLMPTLFI**
14.	28650.m000187_LISCL	347	8.89e-20	**RQIRQHSSPY**	**GDGNQRLAHYFANALETRLAG**	**TGTPAYSPLL**
17.	28650.m000191_LISCL	425	5.87e-19	**KQIRQHSSPF**	**GDGSQRLAHCFANGLEARLAG**	**TGAQIYTALS**
16.	28650.m000190_LISCL	472	5.87e-19	**KQIRQHSSPL**	**GDGSQRLAHCFANGLEARLAG**	**SVTGMQSFYT**
13.	28650.m000186_LISCL	322	6.91e-19	**RQIKQYSSPF**	**GDGNQRLAHFFANGLEARLAG**	**TGTPGYAPAV**
37.	30024.m001746_SCL3	61	8.13e-19	**GQISQLASAE**	**GDTMQRIAAYFTEALAHRIIK**	**AWPGVHRALN**
23.	30131.m007029_Os43	355	9.54e-19	**HHLNRVVTPL**	**GDSMQRVASCFTEALSARLAA**	**TLTTQPSNTA**
18.	29767.m000200_LISCL	402	2.44e-18	**KQIRQHSSPF**	**GDGNQRLAHCFANGLDARLAG**	**TGSQIYKGLV**

Table S2. *Cont.*

38.	30131.m007244_SCL3	80	3.30e-18	**EHISHLASAD**	**GDTMQRIAAYFTEALADRILK**	**KGWPCLHRAL**
28.	29949.m000124_PAT1	211	1.55e-16	**DELRQIVSVS**	**GEPIQRLGAYMLEGLVARLAS**	**SGSSIYKSLR**
25.	27613.m000642_PAT1	202	1.55e-16	**TELRKMVSVS**	**GEPIQRLGAYMLEGLVARLAS**	**SGSSIYRALR**
12.	27568.m000253_LISCL	401	1.75e-16	**KQIRQNASPT**	**GDGMQRMAHIFADGLEARMAG**	**SGTQIYKAFM**
34.	29910.m000940_Rc_GRAS	245	1.99e-16	**KQCDSISSNT**	**GNPVQRVVYYFAEALHDRIDI**	**ETGKTKSKEL**
39.	29634.m002156_SCL4/7	272	3.25e-16	**IKLRESVCEH**	**GDPTERVAFYFTEALYSRLCL**	**QAEKSLAMFE**
19.	29728.m000844_Os19	116	5.92e-16	**SELYTSVCLT**	**GDSVQRVVAYFADGLSARLLT**	**RKSPFYEMIM**
2.	29692.m000540_DELLA	274	6.66e-16	**KQIGFLAVSQ**	**AGAMRKVATYFAEALARRIYR**	**LYPQSPIDHS**
30.	29889.m003281_Rc_GRAS	98	8.43e-16	**NLCDFLSSNK**	**GNSVQRVVHYFTKALQDRISQ**	**ESETVSSKRS**
1.	28677.m000055_DELLA	234	1.19e-15	**KHIGLLAASQ**	**ASSMRKVATYFAEALARRIYK**	**IYPQESLDPS**
42.	30073.m002204_SCR	488	1.68e-15	**LEISQLSTPY**	**GTSAQRVAAYFSEAMSARLIN**	**SCLGIYATLP**
35.	30076.m004651_Rc_GRAS	293	2.36e-15	**SRCEWIASQR**	**ANPVQRVVYCFAEALRERIDK**	**ATGRFIPKER**
24.	27529.m000047_PAT1	206	6.31e-15	**HVLEQMVSVS**	**GEPIQRLGAYMLEGLRARVEL**	**SGSKIYRALK**
27.	29648.m001919_PAT1	222	1.07e-14	**NELRQMVSIQ**	**GDPSSRIAAYMVEGLAARMAA**	**SGKYLYKALK**
33.	29889.m003285_Rc_GRAS	242	1.32e-14	**NQCDRLSSST**	**GNAVERVVHYFCKALRERIDR**	**ETGKSLGKQH**
32.	29889.m003284_Rc_GRAS	227	1.32e-14	**NHCELLSSNI**	**GNPVQRVVYHFSEALKERIDR**	**ETGRFPSIEY**
31.	29889.m003282_Rc_GRAS	181	2.00e-14	**EFCDQSSSNA**	**GNPVQRVVYYFFGALRRRIDQ**	**ELGKITSRSL**
36.	29790.m000809_SCL3	69	2.45e-14	**SEISELSSVS**	**GDSMQRLAARFASALAIRLVK**	**RWPGLYKALN**
20.	29929.m004746_Os4	169	3.32e-14	**SELRANALVF**	**GTSFQRVASCFVQGLSDRLTL**	**LQPLGAVGVL**
6.	29646.m001070_HAM	206	5.45e-14	**RLNHRLQSPV**	**GKPLQRAAFFFKEALQNLLAG**	**SPRTPTHPTS**
41.	29872.m000537_SCR	111	1.08e-13	**PEISELSSPF**	**GSSFERVGSYFAHALQARVVS**	**SCLGTYSPLT**
21.	30147.m013794_Os4	188	1.57e-13	**SELRSSALVF**	**GSSFQRVASCFFQGLADRLSL**	**VQPLGTVSLV**
9.	29908.m006159_HAM	139	1.73e-13	**RLKELVSPND**	**GTNMERLAAYFTDALQGLLEG**	**HGTSTKHLIH**
26.	28166.m001040_PAT1	233	2.29e-13	**EKARAAVSIS**	**GEPIQRLGAYLVEGLVARKES**	**SGNNIYHALR**
22.	30169.m006306_Os4	200	8.94e-13	**AQIWASVNPF**	**GDSLQRVSYCFALGLRSRLSL**	**LQNATSNGTF**
5.	30190.m011131_DLT	315	9.77e-13	**AKLGELSSPK**	**GTAVSRLIAYYTEALALRVTR**	**LWPHIFHIST**
43.	29661.m000901_SHR	66	1.16e-12	**WVLNNIAPPD**	**GDSNQRLTCAFLRALIARAAK**	**SGTCKLLAAM**
46.	30156.m001710_SHR	80	1.27e-12	**WVLNNVASLV**	**GDPNQRLTSWFLRALISRASK**	**VCPTAMNFDG**
10.	29916.m000544_HAM	459	1.51e-12	**ARLNQQLSPI**	**GKPLHRAAFYFKEALQLLLLM**	**NNNPVTSLPP**
11.	30174.m008828_HAM	409	2.32e-12	**RLNHQLSLSI**	**GKPHTRAAFYFKEALQLLLHM**	**NNTANPSSLS**
45.	29706.m001281_SHR	197	4.96e-12	**YVLHELASST**	**GDANHRLAFYGLQALTHHLSS**	**SRTSASIGSV**
44.	29661.m000923_SHR	158	1.54e-11	**WMLNELGSPY**	**GDIDKKLASYFLQALFSRMTD**	**SGERCYRTLA**
40.	28492.m000479_SCR	192	2.68e-11	**ELTQMASPYG**	**PSCAERVVAYFAKAMASRVIN**	**SWLGICSPLI**
29.	30169.m006225_PAT1	278	4.26e-11	**TRVSQVSNPR**	**GNSEQRLMEYMSMALKSRLNS**	**ADNPPPVAEL**
4.	30170.m013590_DELLA	126	6.72e-11	**ILSQILVNSK**	**ARATQSMAALFAEAMSSRVYR**	**LYPQYFDYSY**
3.	29807.m000482_DELLA	184	1.16e-9	**MQALLTRVNT**	**NSGIGKVAGCFIDALSLRIFS**	**PVNGVGVAVG**

Table S2. *Cont.*

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18.	29767.m000200_LISCL	519	5.05e-29	**GIDFPQPGFR**	**PAERVEETGRRLATYAKKFNVPFEYNAIA**	**KKWETIKFEE**
12.	27568.m000253_LISCL	519	4.48e-28	**GIDFPHPGFR**	**PAERVEETGHRLSNYAKKFNVPFEFNAIA**	**QKWDTVQIEQ**
16.	28650.m000190_LISCL	593	8.41e-27	**GIELPQQGFR**	**PAERIEETGRRLARYCERFNVPFEYNSIA**	**AQNWENIRIE**
15.	28650.m000189_LISCL	440	1.33e-26	**GIDYPQPGFR**	**PGERVEETGRRLKRLADKLNVPFEYNAIA**	**QKWETIQGED**
17.	28650.m000191_LISCL	543	4.97e-26	**GIELPQSGFR**	**PGERVQETGRRLAKYCELHKVPFEYNAIA**	**KKWETIQIDD**
14.	28650.m000187_LISCL	465	2.62e-25	**GIELPQPGFR**	**PAERVEETGRRLQRYCERFNVPFKYHAVA**	**QKWETIKYED**
13.	28650.m000186_LISCL	440	2.20e-24	**GIEFPQPGFR**	**PAERVEETGRRLSKYCERFNVPFEYDSIA**	**QNWESIQYED**
5.	30190.m011131_DLT	429	1.03e-21	**SHVRITGIGE**	**SKQELNETGDRLAGFAEALNLPFEFHPVV**	**DRLEDVRLWM**
27.	29648.m001919_PAT1	340	1.02e-20	**GIDDPESVQR**	**STGGLKIIGQRLEKLAEALKVPFEFHAVA**	**SKTSLVSPSM**
23.	30131.m007029_Os43	472	1.54e-20	**PFLRITGVGS**	**CIESVRETGRCLTELAHSLHVPFEFHPVA**	**EELEDLKPHM**
42.	30073.m002204_SCR	601	2.30e-20	**PYVRLTGLGT**	**SIEALEATGKRLSDFAQKLGLPFEFFPVA**	**DKVGNLDPDR**
32.	29889.m003284_Rc_GRAS	343	3.43e-20	**LLKISAIGTT**	**SKHLIEDTGKRLASFAESMNVPFSFRAVM**	**VSDMLDLKKE**
41.	29872.m000537_SCR	226	6.60e-20	**RSMRITGFGS**	**SSELLESTGRRLADFASSLGLPFEFHPLE**	**GKIGSVSDIS**
28.	29949.m000124_PAT1	329	4.85e-19	**GIDDSTSAYA**	**RGGGPNIVGKRLAKLAESVKVPFEFHAAA**	**MPNSEVHIKN**
24.	27529.m000047_PAT1	324	4.85e-19	**GVDDPQSAYA**	**RGGGLDIVGKRLSSFAESHNVPFQFHDAA**	**MSGCEVQLEH**
2.	29692.m000540_DELLA	383	6.17e-19	**LTGIGPPSHD**	**NSDHLQEVGWKLAQLAETIHVEFEYRGFV**	**ANSLADLDAS**
25.	27613.m000642_PAT1	320	1.25e-18	**GIDDSTSAYA**	**RGGGLDIVGQRLSRLAESCKVPFEFHAAG**	**VSGSEIELKN**
40.	28492.m000479_SCR	300	1.58e-18	**PHIRMTGMGT**	**SMDLLVETGKQLSNFAKRLGLSFEFHPIA**	**KKFGEIDVSM**
1.	28677.m000055_DELLA	343	2.23e-18	**LTGIGPPQSN**	**NTDALQQVGWKLAQLADTIGVEFEFRGFV**	**ANSLADLQPE**
38.	30131.m007244_SCL3	194	1.05e-16	**PHLRITGIHE**	**QKEVLEQMALRLTEEAEKLDIPFQFNPIM**	**SKLEDLDIES**
4.	30170.m013590_DELLA	234	1.56e-16	**ISGIGFPNHD**	**NSDYLKSVGWKLAQLAETLNIDFEYRGFL**	**AYNLADLDAA**
33.	29889.m003285_Rc_GRAS	358	1.90e-16	**LLKITAVGTT**	**SKHLIKDTGKRLTSFAESISLPFAFNIVM**	**VSDMLDLTED**
35.	30076.m004651_Rc_GRAS	411	2.31e-16	**LKVTALGLTG**	**KGKKIEETGRSLESFAKSMNIPFTFKAVY**	**VSCMKNIKEK**
37.	30024.m001746_SCL3	174	4.53e-16	**PHLRITGIHQ**	**QKEVLDQMAHKLSEEAERLDIPFQFNPIV**	**SKLENLDIEK**
9.	29908.m006159_HAM	267	4.53e-16	**LSRGGNSGKR**	**SIGTVQETGRRLVAFAASIGQPFSFHHCR**	**LDSDESFRPS**
39.	29634.m002156_SCL4/7	389	7.26e-16	**GIPAPVLGKS**	**PAASLLATGNRLGDFAKLLDLNFEFVPIL**	**TPIQELNESN**
46.	30156.m001710_SHR	200	2.00e-15	**PFTRPQVPPW**	**LNVSTEEVGLRLGNFAKSRDVPFEFIVID**	**DPSSDILCKE**

Table S2. *Cont.*

34.	29910.m000940_Rc_GRAS	365	2.19e-15	**HLKITAIGTT**	**SRELIENTGKRLISFAETMNIAFSFKMAL**	**VSDLLDLKED**
44.	29661.m000923_SHR	291	3.13e-15	**GGGGNCGLVS**	**AQKVMKEIGSRMEKFARLMGVPFKFNVIH**	**HAGDLCDLNL**
3.	29807.m000482_DELLA	297	8.94e-15	**LTGIGPPSPD**	**GRDSLREIGVKLAELARSVNVRFAFRGVA**	**ASRLEDVKPW**
20.	29929.m004746_Os4	290	1.37e-14	**RCLRITGVGN**	**SAERLQALGDELDCYARSLGLNFEFLWVE**	**SSLEKLKSTD**
30.	29889.m003281_Rc_GRAS	221	4.38e-14	**LKISGVGVKA**	**SRQRIEDAGKSLACFANTLDLPFSFKTII**	**VASIKDLKKD**
29.	30169.m006225_PAT1	395	2.13e-13	**ITAVADNSAE**	**EKERLKVVGTTLSQLAEQFGVSLHFNVVS**	**AKLGDLSRES**
43.	29661.m000901_SHR	191	1.83e-12	**AGCTEDIPPM**	**LDLSYEELGCKLINFARSRNVIMEFRVVD**	**SSYADGFSSL**
21.	30147.m013794_Os4	310	2.12e-12	**CRLRITAVGL**	**CVGRFQTIGDELVEYAKDVGINLEFSVVE**	**STLENLQPDD**
7.	29820.m000985_HAM	293	3.72e-12	**ITAIKWREEH**	**PWRKLEETKRRLQNYADSLGLMLHVEEIE**	**VQNLAREIKR**
36.	29790.m000809_SCL3	182	4.91e-12	**PHLKFTCLNT**	**DKAILDKLGQRLVKEAEASDMAFQFHPLN**	**ISLRDLTADM**
22.	30169.m006306_Os4	321	3.63e-11	**RITGLINDHQ**	**NLLELEASMKVLAEDASSLGVSLEFNMIL**	**ESVTPSLLTR**
11.	30174.m008828_HAM	522	9.99e-11	**KITAFVSPSH**	**DEIELGFTQENLRVFAGEINMPFELEILG**	**LDALNSGSWS**
6.	29646.m001070_HAM	325	9.99e-11	**LRITAVVTED**	**YAIQTQLIKQCLSQYALELKIRFQIEFVL**	**TRTFEMVSFK**
10.	29916.m000544_HAM	576	2.21e-10	**ITAFASPSTH**	**HPVEVLLMRENLTQFANEIGISFELDVIN**	**FDSLEQSCYS**

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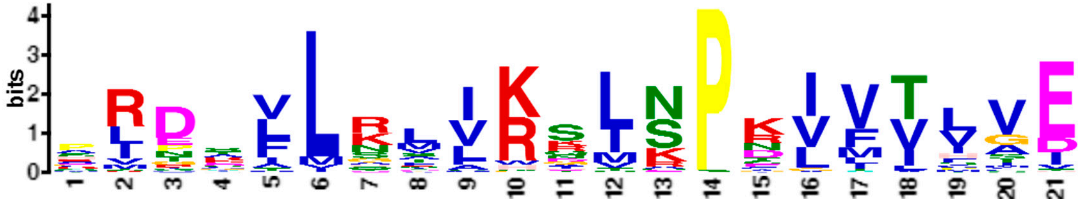
17.	28650.m000191_LISCL	384	3.82e-34	**GGKARAKRQG**	**NKKEVVDLRTLLILCAQAVSSDDRRTANEILKQIRQHSSPF**	**GDGSQRLAHC**
18.	29767.m000200_LISCL	361	2.09e-31	**GGKGRGKKHN**	**GKKEVVDLRTLLISCAQAVAADDRRSAYEMLKQIRQHSSPF**	**GDGNQRLAHC**
16.	28650.m000190_LISCL	431	1.12e-30	**GGKTRSKKQS**	**KKKETVDLRSLLILCAQAVSGNDFRTANELVKQIRQHSSPL**	**GDGSQRLAHC**
2.	29692.m000540_DELLA	233	9.91e-28	**PTTRPVVLVD**	**SQENGIRLVHLLMACAEAVQQNNLTLAEALVKQIGFLAVSQ**	**AGAMRKVATY**
12.	27568.m000253_LISCL	360	1.40e-27	**SGKGRGKKQK**	**GKSNVVDLRTLLTLCAQAVAADDRRNTNDLLKQIRQNASPT**	**GDGMQRMAHI**
42.	30073.m002204_SCR	447	1.04e-26	**EKKEEQRQQK**	**RDEEGLHLLTLLLQCAEAVSADNFEEANKMLLEISQLSTPY**	**GTSAQRVAAY**
1.	28677.m000055_DELLA	193	8.27e-26	**EPNRPMVLID**	**SQETGVRLVHTLLACAEAIQQDNFKLAEALLKHIGLLAASQ**	**ASSMRKVATY**
28.	29949.m000124_PAT1	170	1.31e-25	**PEMDIWRQMM**	**EAISRGDLKHVLIACAKAVSDNDLLMAQWLMDELRQIVSVS**	**GEPIQRLGAY**
15.	28650.m000189_LISCL	281	3.87e-24	**PNNTRMRRHA**	**KDKKMFDLSTLLIQCAQATGTGDQRTAYQQLKLIRLHASPY**	**GDANQRLAHY**
14.	28650.m000187_LISCL	306	4.46e-24	**GRTARGRRQG**	**NKGEVVDLSTLLAQCAQSVSISDHRTATELLRQIRQHSSPY**	**GDGNQRLAHY**
13.	28650.m000186_LISCL	281	2.34e-23	**RTARTKKRGS**	**NKRDMMDLWTVLPQCAQAVANDDQTTAKELLRQIKQYSSPF**	**GDGNQRLAHF**
22.	30169.m006306_Os4	159	1.69e-22	**MVPSMEEVSY**	**GVDRGLHLVHLLLACAEAVGCRDTQLANSVLAQIWASVNPF**	**GDSLQRVSYC**
20.	29929.m004746_Os4	128	1.69e-22	**MISKKNEIKE**	**EDIDGMKLVQQLIACAEAVACRDKTHASALLSELRANALVF**	**GTSFQRVASC**

Table S2. *Cont.*

41.	29872.m000537_SCR	70	2.83e-22	**AIKEGEEEEE**	**EDSTGLRLLGLLLQCAECVAMDNLDEAADLLPEISELSSPF**	**GSSFERVGSY**
21.	30147.m013794_Os4	147	2.83e-22	**SEEGENHGEG**	**GNTDGMRLVQLLIACAEAVACRDKSHASALLSELRSSALVF**	**GSSFQRVASC**
23.	30131.m007029_Os43	314	2.33e-21	**MVPLPIGPEQ**	**EQDSGLQLVHLLLACAEAVAKEDYMLARKYLHHLNRVVTPL**	**GDSMQRVASC**
24.	27529.m000047_PAT1	165	8.67e-21	**QARWDWTRME**	**EMIPRLDTRQILFACAQAISDGDISRAAALMHVLEQMVSVS**	**GEPIQRLGAY**
25.	27613.m000642_PAT1	161	9.75e-21	**SEEEKWKFLM**	**ETVSRRDLKEVLYACAQAIDSNDMLTVEWLMTELRKMVSVS**	**GEPIQRLGAY**
36.	29790.m000809_SCL3	28	1.55e-20	**LSSASPSPYE**	**TQERGIRLIQLLLKCANDASSGNLHRADACLSEISELSSVS**	**GDSMQRLAAR**
40.	28492.m000479_SCR	150	2.46e-20	**GASNGRGLSR**	**IDEHGLNLISLLFECAVAISVDNLGEAHRMLLELTQMASPY**	**GPSCAERVVA**
38.	30131.m007244_SCL3	39	3.88e-20	**SPYPWLRELK**	**SEERGLYLIHLLHACASHVAAGSVENANICLEHISHLASAD**	**GDTMQRIAAY**
43.	29661.m000901_SHR	25	3.53e-19	**GFPTSKALGN**	**NFGDANCMEQLLVHCANAIESNDATLAQQILWVLNNIAPPD**	**GDSNQRLTCA**
27.	29648.m001919_PAT1	181	3.94e-19	**SSSTSSNKEV**	**SQLSPRAPKRLLLECANALAEDNIEAADALINELRQMVSIQ**	**GDPSSRIAAY**
35.	30076.m004651_Rc_GRAS	252	5.42e-19	**FGYALSGLSE**	**EETRDVELAHLLLAAAEKVGYQQFDRASRLLSRCEWIASQR**	**ANPVQRVVYC**
37.	30024.m001746_SCL3	20	1.02e-18	**SPYPWLRELK**	**SEERGLYLIHLLLTCGNHVAAGSLENAEIALGQISQLASAE**	**GDTMQRIAAY**
45.	29706.m001281_SHR	156	2.88e-18	**KGAANNANSG**	**NNKEGRWAEDLLNPCAAAVSTGNLSRVQHLLYVLHELASST**	**GDANHRLAFY**
32.	29889.m003284_Rc_GRAS	186	4.80e-18	**FGLFFSDLSD**	**DESRNVELVELLLASAEKVGYQQFERASRLLNHCELLSSNI**	**GNPVQRVVYH**
5.	30190.m011131_DLT	274	9.68e-18	**TEEAAGANHQ**	**EEYQAYELVSLLTACVEAIGSKNMAVINHCIAKLGELSSPK**	**GTAVSRLIAY**
33.	29889.m003285_Rc_GRAS	201	3.14e-17	**FDLSFSGLSV**	**DEAKKVELAELLLLSAEKVGNQQYERASILLNQCDRLSSST**	**GNAVERVVHY**
19.	29728.m000844_Os19	75	2.74e-16	**KPDQKKKGVV**	**EDGKGLHLIHLLLITATAVDENNVATALENLSELYTSVCLT**	**GDSVQRVVAY**
46.	30156.m001710_SHR	39	6.22e-16	**SLSGALRGCL**	**GSLDGACIEKLLLHCASALESNDGTLAQQVMWVLNNVASLV**	**GDPNQRLTSW**
10.	29916.m000544_HAM	418	1.16e-15	**EVGGGHQQQQ**	**QAQHQHALLDQLYKAAELVGTGNFSHAQGILARLNQQLSPI**	**GKPLHRAAFY**
30.	29889.m003281_Rc_GRAS	57	1.39e-15	**FDGSQFGLSG**	**EEIKDVELSLLLLASAHRVGNRQFDHASKLLNLCDFLSSNK**	**GNSVQRVVHY**
3.	29807.m000482_DELLA	141	1.65e-15	**QNQLRVVTAT**	**EEDSAIRLVHLLMTCAESIQRGDLSLAGSLVEDMQALLTRV**	**NTNSGIGKVA**
34.	29910.m000940_Rc_GRAS	204	1.81e-15	**FDLYFSGLSD**	**EDAKHVELAESLLASAERIGNQQYDSASRLLKQCDSISSNT**	**GNPVQRVVYY**
44.	29661.m000923_SHR	117	7.80e-15	**FSFSPSHDLN**	**FDFSSRWATDILLETARAIADKNSARVQQLMWMLNELGSPY**	**GDIDKKLASY**
26.	28166.m001040_PAT1	192	1.19e-14	**YHKGIEETGL**	**QSIPPDNLKQLLIACAKALSENNINEFDRLIEKARAAVSIS**	**GEPIQRLGAY**
31.	29889.m003282_Rc_GRAS	140	1.16e-13	**AGQGLSTEEI**	**KRQNMWSLLNFFLASAEKVSNGKFDRASRLLEFCDQSSSNA**	**GNPVQRVVYY**
7.	29820.m000985_HAM	132	1.85e-13	**QSLIMPKECM**	**GISNLFSLTNLAMAYAEATENKQAALAEVIMRRIGEKVSPI**	**SGIKERLLYY**
29.	30169.m006225_PAT1	237	3.43e-13	**PTSSSSSTSV**	**TTPLPNYSKHTLVEAASAIYDGKTEVASEILTRVSQVSNPR**	**GNSEQRLMEY**
6.	29646.m001070_HAM	164	3.44e-12	**SLDLSHNIGN**	**WSNFGFDLIQELIRAADCIDSSEIQLANVILDRLNHRLQSP**	**VGKPLQRAAF**
11.	30174.m008828_HAM	367	9.98e-12	**KQKIMTDELA**	**AQQLQQAIINPICQAAELIETGNPALAQGILARLNHQLSLS**	**IGKPHTRAAF**
4.	30170.m013590_DELLA	264	1.75e-8	**IDFEYRGFLA**	**YNLADLDAAMLELRTHEAIAVNAVFALHKLLARPGDIHKLL**	**SMVKHIEPEI**

Table S2. *Cont.*

Motif 9

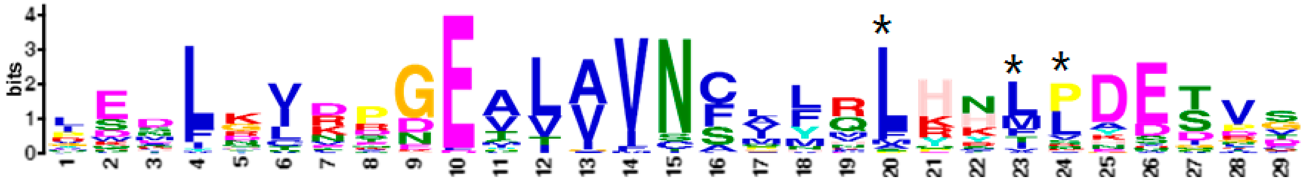


26.	28166.m001040_PAT1	309	4.58e-21	**HSDESVDVSN**	**PRDGLLRMIKSLNPKVVTLVE**	**QESNTNTTPF**
28.	29949.m000124_PAT1	397	1.94e-20	**LPDESVSTQN**	**HRDRLLRLVKSLSPKVVTLVE**	**QESNTNTAAF**
25.	27613.m000642_PAT1	388	1.94e-20	**MPDESVGTQN**	**HRDRLLRLVKSLSPKVVTLVE**	**QESNTNTAPF**
24.	27529.m000047_PAT1	392	2.05e-18	**MPDESVSTWN**	**HRDRLLRLVKSLSPKVVTLIE**	**QESNTNTKPF**
27.	29648.m001919_PAT1	408	4.94e-18	**MPDESVSTVN**	**ERDQLLRMVKSLNPKLVTVVE**	**QDVNTNTAPF**
3.	29807.m000482_DELLA	366	3.50e-17	**LLGSDPNRNL**	**SIDMVLNWIRNLNPKIMTVVE**	**QEANHNQPGF**
2.	29692.m000540_DELLA	450	8.14e-16	**ELHKLLARPG**	**AIDKVLSVVKQMKPEIVTIVE**	**QEANHNGPVF**
29.	30169.m006225_PAT1	463	2.58e-15	**MPDESVSTEN**	**PRDELLRRVKGLAPRVVTLVE**	**QEMNTNTAPF**
1.	28677.m000055_DELLA	410	8.60e-15	**ELHRLLARPG**	**GMEKVLSSIKAMKPKIVTVVE**	**QEASHNGPVF**
17.	28650.m000191_LISCL	611	1.91e-14	**LLDETVVVNS**	**PRNAVLNLIRKMSPDIFIHAI**	**VNGSYSAPFF**
14.	28650.m000187_LISCL	533	2.98e-14	**LPDDTVVANS**	**ARDAVLKLIRKIRPDIFIHGV**	**INGTYNAPFF**
15.	28650.m000189_LISCL	508	3.70e-14	**LPDDTIVLDS**	**PRDAVLRLIKSINPVIFLHGV**	**VNGSYNAPFF**
18.	29767.m000200_LISCL	587	4.58e-14	**LLDETVVVDS**	**PKDIVLRLVKKINPNIFILGI**	**INGAYSAPFF**
39.	29634.m002156_SCL4/7	454	5.10e-14	**LYNLLDETYG**	**AVETALKMAKSLNPEIVTLGE**	**YEASLNQIGY**
46.	30156.m001710_SHR	289	2.13e-13	**EQKCRAQDSS**	**LRDTFLHSIKILNPCITVIVD**	**EDSDLDAPDL**
37.	30024.m001746_SCL3	297	2.13e-13	**SSPLSSTASV**	**KMDYFLNTLWSLSPKLMVVME**	**QDSNHNGSSL**
19.	29728.m000844_Os19	301	2.85e-13	**SHLNTLNDFL**	**KIPDTLKSIHSLNPSIVILVE**	**QEGSRSPRSF**
13.	28650.m000186_LISCL	508	5.05e-13	**IPDDTMVVNS**	**MRDSILKLMRRINPDIFIHGV**	**VNGTYNAPFF**
34.	29910.m000940_Rc_GRAS	430	6.67e-13	**LPRNLISLPN**	**RLDSMMRMIKNVNPCVIVVAE**	**VEANHNSPTF**
16.	28650.m000190_LISCL	662	6.67e-13	**LLDEIVEVDC**	**PRNAVLDLIRKIKPNIYVHCI**	**INGSYNAPFF**
10.	29916.m000544_HAM	641	1.05e-12	**PVWSASNQPA**	**ALPSLLRFVKQLSPKIVVSLD**	**RGDRTDLPFP**
12.	27568.m000253_LISCL	587	1.26e-12	**LLDETVVVES**	**PRTNVLNLIREMNPDVFITGI**	**VNGAYNAPFF**
43.	29661.m000901_SHR	289	2.33e-12	**ESSSSSSMSS**	**LRTMFLKSLRSLDPTIVVLVD**	**EDADLTSNNL**
11.	30174.m008828_HAM	586	2.33e-12	**PIAPFSNYPS**	**SLPVVLRFVKQLSPKIVVSLD**	**RGCDRTDLPF**
23.	30131.m007029_Os43	534	2.54e-12	**VNRLHHVPGN**	**CLPNLLAMIRDQAPNIVTIVE**	**KEASHNGPYF**
32.	29889.m003284_Rc_GRAS	408	4.22e-12	**FLMNLLVAPN**	**RLESIMGMLRNINPNVMVVME**	**VEANNNSPSF**

Table S2. *Cont.*

35.	30076.m004651_Rc_GRAS	476	6.37e-12	**FLRTLISSPE**	**CLENLMRVIKNLKPSIMVINE**	**IEANHNSPNF**
22.	30169.m006306_Os4	388	6.92e-12	**LHKFVKESRG**	**SLKAILQAIKRLSPTLLTVVE**	**QDANHNGPFF**
30.	29889.m003281_Rc_GRAS	286	7.50e-12	**ILRFIKAQQD**	**CLQCLLTVLRKLNPCVMVIIE**	**PVLNHSSPIF**
33.	29889.m003285_Rc_GRAS	423	8.13e-12	**LLRSLISLPD**	**RLNSVMKVIRILNPSITVVTE**	**PEYNSTSSSF**
45.	29706.m001281_SHR	394	1.21e-11	**LHHLNHNNPD**	**ERTEFLKVLRSLEPKGVILSE**	**NNTDRCQICG**
21.	30147.m013794_Os4	375	1.31e-11	**LHCVVKESRG**	**ALNSVLQTIHALSPKILALVE**	**QDSSHNGPFF**
38.	30131.m007244_SCL3	318	1.66e-11	**LSPLSLAPSP**	**KMGSFLNALWGLSPKLMVITE**	**QESNHNGFTL**
20.	29929.m004746_Os4	355	2.84e-11	**LHCAVKESRG**	**ALNTVLQILHELSPKLLILVE**	**QDSGHNGPFF**
5.	30190.m011131_DLT	495	2.84e-11	**HKTLYDGNGG**	**ALRDFLGLIRSTSPTIVLMAE**	**QEAEHNATNL**
44.	29661.m000923_SHR	357	3.83e-11	**SLHSVTTVAN**	**RRDYIISNFRRLQPRIITIVE**	**EEADLDVGID**
36.	29790.m000809_SCL3	264	9.88e-11	**NRSTCIKDCK**	**QMSDFLAMVRSMSPRLLFLVE**	**QEADHNLNRL**
9.	29908.m006159_HAM	333	1.22e-10	**LPHFSYRAPD**	**SVASFLSGSKTLSPRLVTLVE**	**EEVGPVGDGG**
6.	29646.m001070_HAM	391	1.61e-10	**TFRRLGSSNN**	**NINSFVTDIRRVSPEVVVVVD**	**NEGWGESEPA**

Motif 10



28.	29949.m000124_PAT1	365	1.05e-25	**AAAMPNSEVH**	**IKNLGVEPGEALAVNFAFMLHHLPDESVS**	**TQNHRDRLLR**
24.	27529.m000047_PAT1	360	2.34e-25	**DAAMSGCEVQ**	**LEHLCVRPGEAVVVNFPYVLHHMPDESVS**	**TWNHRDRLLR**
27.	29648.m001919_PAT1	376	4.38e-25	**AVASKTSLVS**	**PSMLDCKAGEALVVNFAFQLHHMPDESVS**	**TVNERDQLLR**
25.	27613.m000642_PAT1	356	5.96e-25	**AAGVSGSEIE**	**LKNLGIRPGEALAINFALMLHHMPDESVG**	**TQNHRDRLLR**
12.	27568.m000253_LISCL	555	1.71e-24	**AIAQKWDTVQ**	**IEQLKIDKNEVLVVNCLYRLRNLLDETVV**	**VESPRTNVLN**
14.	28650.m000187_LISCL	501	1.28e-23	**AVAQKWETIK**	**YEDLNIDRGEMTVVNCLYRLRNLPDDTVV**	**ANSARDAVLK**
17.	28650.m000191_LISCL	579	1.33e-21	**AIAKKWETIQ**	**IDDLKLNHGEVVAVNCLFRSKNLLDETVV**	**VNSPRNAVLN**
13.	28650.m000186_LISCL	476	2.71e-21	**SIAQNWESIQ**	**YEDFKIDRNEMIVVNCLYRLKNIPDDTMV**	**VNSMRDSILK**
39.	29634.m002156_SCL4/7	425	6.85e-21	**PILTPIQELN**	**ESNFRVDPDEVLAVNFMLQLYNLLDETYG**	**AVETALKMAK**
15.	28650.m000189_LISCL	476	6.93e-20	**AIAQKWETIQ**	**GEDLQIDKDEVVAVCCMNRLKNLPDDTIV**	**LDSPRDAVLR**
16.	28650.m000190_LISCL	630	1.30e-19	**IAAQNWENIR**	**IEELKINSNEVLAVNCLARFKNLLDEIVE**	**VDCPRNAVLD**
29.	30169.m006225_PAT1	431	1.97e-19	**VVSAKLGDLS**	**RESLGCEPEEPLAVNFAFNLYRMPDESVS**	**TENPRDELLR**
5.	30190.m011131_DLT	465	1.95e-18	**PVVDRLEDVR**	**LWMLHVKEGESVAVNCVFQMHKTLYDGNG**	**GALRDFLGLI**

Table S2. *Cont.*

21.	30147.m013794_Os4	346	4.18e-18	**VVESTLENLQ**	**PDDIKVFDGEVLVVNSILQLHCVVKESRG**	**ALNSVLQTIH**
3.	29807.m000482_DELLA	334	1.16e-17	**VAASRLEDVK**	**PWMLQVNPKEAIAVNSIMQLHKLLGSDPN**	**RNLSIDMVLN**
18.	29767.m000200_LISCL	555	1.82e-17	**AIAKKWETIK**	**FEELKIDREEIIVVTCFYRAKNLLDETVV**	**VDSPKDIVLR**
22.	30169.m006306_Os4	359	8.17e-17	**LESVTPSLLT**	**RENLNLRDGEALFFNSIMHLHKFVKESRG**	**SLKAILQAIK**
38.	30131.m007244_SCL3	230	3.73e-16	**PIMSKLEDLD**	**IESLRVKTGEALAVSSVLQLHSLLAADDE**	**LLKQKSPATK**
37.	30024.m001746_SCL3	210	1.47e-15	**PIVSKLENLD**	**IEKLRVKTGEALAISSVLQLHSFLASDDE**	**LRKRSPVTLK**
46.	30156.m001710_SHR	254	3.49e-15	**HFESLLNHLS**	**PSALNLRDDEALVINCQNWLRYLSNEQKC**	**RAQDSSLRDT**
9.	29908.m006159_HAM	304	5.53e-15	**CRLDSDESFR**	**PSALKLVRGEALIMNCMLHLPHFSYRAPD**	**SVASFLSGSK**
20.	29929.m004746_Os4	326	1.83e-14	**WVESSLEKLK**	**STDFKLLDGEVVIINSILQLHCAVKESRG**	**ALNTVLQILH**
43.	29661.m000901_SHR	236	1.27e-13	**FSSLIEQLRV**	**QNLVYTDSGEALVINCHMLPHYIPEETLS**	**GIHNTTNSSN**
36.	29790.m000809_SCL3	218	2.06e-13	**PLNISLRDLT**	**ADMLQVASGEALAFISILNLHLLLAEDDR**	**VDAHFGGNRS**
45.	29706.m001281_SHR	365	3.07e-12	**LDNHPLQSLN**	**AQVINTNPEDTLVVCAQFRLHHLNHNNPD**	**ERTEFLKVLR**

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15.	28650.m000189_LISCL	69	4.51e-33	**YNSETSNFSQ**	**AVLKYISDMLMEEDLEDKPCMLQDCLA**	**LQAAEKSLYD**
14.	28650.m000187_LISCL	77	1.29e-31	**SSEGHDPNNN**	**AVLKYISDMLMEEDLEGKTCMLQDCLA**	**LQAAEKSLYD**
17.	28650.m000191_LISCL	84	1.86e-30	**SPSDDNDFSE**	**TVLNYISQMLMEEDMEQKPCMFHDPLA**	**LQAAERSLYD**
18.	29767.m000200_LISCL	82	1.02e-29	**DSPEDCDFSD**	**TVLRYISQMLMEEDIEDKTCMLQDSLD**	**LQAAEKSFYE**
12.	27568.m000253_LISCL	80	2.35e-28	**DLHEDFDFSD**	**VVLKYISDMLMEEDIEEKTCMFQESSA**	**ALQAAEKSLY**
16.	28650.m000190_LISCL	111	2.01e-27	**SPSDDSDSSD**	**PVLKYISQMLMEENMEDKPPMYYDPLD**	**LKATEKSLYD**
13.	28650.m000186_LISCL	82	1.01e-25	**DSPDNSDISN**	**VVLKYISDMLMEEELESKNFMFEDCLA**	**LQAAEKSFYD**

Table S2. *Cont.*

Motif 12

25.	27613.m000642_PAT1	441	9.53e-15	AIFESIDVTL	PRGHKERINVEQHCL	AREVVNIVAC
28.	29949.m000124_PAT1	450	1.15e-14	AMFESIDVTL	SREHKERINVEQHCL	ARDVVNIIAC
27.	29648.m001919_PAT1	461	3.94e-14	AVFESLDATL	PRESQDRMNVEKQCL	ARDIVNIVAC
24.	27529.m000047_PAT1	445	4.96e-12	AMFESIDAGS	SRDDKQRINAEQHCV	ARDIVNMIAC
13.	28650.m000186_LISCL	561	6.38e-12	ALFDMIDSTI	PREEPERMMFEKEVF	GRYAVNVIAC
26.	28166.m001040_PAT1	362	7.22e-12	AMFESIDVRL	PRERKDRIGVEQHCL	AKDIVNIIAC
17.	28650.m000191_LISCL	664	9.24e-12	ALFDMFDTNM	SREDQMRLKFEKEFY	GREALNVIAC
22.	30169.m006306_Os4	442	1.18e-11	IFDSLEASLL	PRNSRQRMKIEKLHF	AEEIRNIVAY
18.	29767.m000200_LISCL	640	1.18e-11	SLFDMLDSIV	PREDMERMLIEKEII	GREALNVVAC
37.	30024.m001746_SCL3	350	1.68e-11	ALFDCLESTV	SRTSLERLKVEKMLF	GEEIKNIISC
12.	27568.m000253_LISCL	640	1.89e-11	TLFDMLETNV	PREIPERMLIEREIF	GWEAKNVIAC
14.	28650.m000187_LISCL	586	3.76e-11	ALFDMFEINV	PREDDQRMLYEKAIF	GRDIMNVIAC
23.	30131.m007029_Os43	587	1.37e-10	AIFDSLDATF	PPDSTQRAKVEQYIF	APEIRNIVAC
39.	29634.m002156_SCL4/7	507	5.49e-10	AVFESLEPNL	SRDSTERLQVERLLL	GRRIAGAVGP
21.	30147.m013794_Os4	428	5.49e-10	AIFDSLDAML	PRYDTRRAKMEQFYF	AEEIKNIVSC
15.	28650.m000189_LISCL	561	6.63e-10	SLFDMFEAIA	TREDQERLVFERELI	GKDVMNVVAC
16.	28650.m000190_LISCL	715	7.99e-10	SLFDMFDSTL	SREDQGRMMLENEIY	GREAMNVVAC
38.	30131.m007244_SCL3	371	9.61e-10	ALFDCLESTV	SRPSIERQKVEKMLL	GEEIKNIIAC
29.	30169.m006225_PAT1	516	1.15e-9	ALFESIESTV	QRDHTERVKVEEGLG	RKLANSVACE
20.	29929.m004746_Os4	408	1.51e-9	AIFDSLDTML	PKYDTKRVKIEQFFY	GEEIKNIVSC
42.	30073.m002204_SCR	715	1.80e-9	ALFDSLGASY	GEESEERHVVEQQLL	SREIRNVLAV
34.	29910.m000940_Rc_GRAS	483	2.15e-9	AYFDCLDACM	ERNDKNRMIMESMYF	GIGIKNMIAT
41.	29872.m000537_SCR	341	3.92e-9	ALFDALGDGL	GIDSVERHTVEQQLF	GCEIRNIVAV
43.	29661.m000901_SHR	342	1.23e-8	IPYDTVDTFL	PRGSKQRQWYEADIC	WKIENVIAHE

Table S2. *Cont.*

32.	29889.m003284_Rc_GRAS	461	1.55e-8	AYFDCFDACM	ERDDPNRMAAESVFF	HHGIRNIVAS
44.	29661.m000923_SHR	414	2.85e-8	VYFESLEESF	SRTSNERLMLERSAG	RAIVDLVACQ
19.	29728.m000844_Os19	354	3.07e-8	AMYDSLDDCL	PLESSERLSIEKNHL	GKEIKSMLNY
5.	30190.m011131_DLT	548	3.07e-8	AIFDSINTSL	PLDSLVRIKIEEMFA	REIRNIVACE
46.	30156.m001710_SHR	342	3.56e-8	IPFDALETFL	PTDSCQRIEYESDIG	HKIENIISYE
40.	28492.m000479_SCR	414	3.83e-8	TLFDSLGAFL	PCDDSSRHRVEHCLL	YREINNVLAI
45.	29706.m001281_SHR	450	4.43e-8	FLDSTSSAFK	GRESEERRVMEGEAA	KALINCGEMN
9.	29908.m006159_HAM	387	2.48e-7	ALYDSLEAGF	PMQSRARALVERVFL	GPRIAGSLDR
33.	29889.m003285_Rc_GRAS	475	4.43e-7	SAYFDCLESC	MKDNSNRMILESLHF	GEGIKNIVAT

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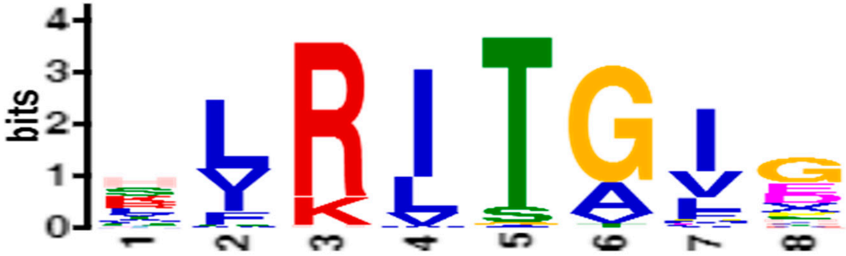
2.	29692.m000540_DELLA	551	1.22e-19	TRLGLAGFAP	VHLGSNAFKQASMLLALFAGG	DGYRVDENNG
1.	28677.m000055_DELLA	514	1.22e-19	TRFESAGFDR	VHLGSNAFKQASMLLALFAGG	DGYRVEENNG
39.	29634.m002156_SCL4/7	559	4.62e-16	ILMESCGFES	VALSHYAMSQAKILLWNYNYS	SLYSLVESQP
23.	30131.m007029_Os43	638	1.61e-15	KLMEGKGFKG	VPLSANAVTQSKILLGLYSCD	GYRLTEDKGC
42.	30073.m002204_SCR	765	5.29e-15	EKLRQSGFKG	ISLAGNAATQATLLLGMFPSD	GYTLVEDNGT
41.	29872.m000537_SCR	391	6.52e-15	NELRRAGFQP	VSLGGNPAAQASLLLGMFPWK	GYTLVEEENG
3.	29807.m000482_DELLA	467	1.09e-14	SRLTAAGFMP	LHLGSNAFKQASMLLTLFSSE	GYCVEENDGC
37.	30024.m001746_SCL3	401	4.79e-14	QRLDLAGFGN	VPLSYCGLLQARRLLQGYGCD	GYRIKDENGC
38.	30131.m007244_SCL3	422	5.27e-14	LRLELAGFGR	VPLSYHGMLQASRLLQSYGYD	GYKIKEENGC
32.	29889.m003284_Rc_GRAS	512	5.27e-14	SFFARFGMIQ	TELSTSSLYQASLVLKKFPCG	SSCTLDVNEK
9.	29908.m006159_HAM	436	3.29e-13	EWSSGAGFRP	VNISFANHCQAKLLLGLFNDG	YRVEELGCNR
33.	29889.m003285_Rc_GRAS	526	4.68e-13	AFFTRFGMLE	TELSTSSLCQAKLIAKKFACG	NACTLSMDGK
34.	29910.m000940_Rc_GRAS	534	1.01e-12	AFFARFGMVE	TDLSSSALLQANLIVKKFACG	NCFTLDRNGK
35.	30076.m004651_Rc_GRAS	579	1.67e-12	AFFSRFRMVE	IGFSESALYQASLVCKQFACG	SSCSLDKNGK
30.	29889.m003281_Rc_GRAS	389	2.51e-12	DYFIRFGMVE	TQVSMSSFYQAELMLKNFASG	KSCLLVRNGK
40.	28492.m000479_SCR	466	2.72e-12	LAARSTSFMQ	VPMSGNSMAQAQLILNMFPPA	HGYSLAQGEG
5.	30190.m011131_DLT	598	1.04e-11	KLMEQGGFRC	MGISEREVLQSQMLLKMYSCE	DYRVKERQDR
19.	29728.m000844_Os19	407	1.34e-10	GRMENHGFSG	MKLSSKSLIQAKLLLKIRTHH	SPPQFNGENS
43.	29661.m000901_SHR	392	3.43e-8	QRMRNANFRS	ISFGEEAVSEVKTMLGEHAAG	WGLKKEEDDL

Table S2. *Cont.*

Motif 14



5.	30190.m011131_DLT	420	1.12e-10	**SLASRTNPPS**	**HVRITGIG**	**ESKQELNETG**
38.	30131.m007244_SCL3	185	3.65e-10	**TLSARPEGPP**	**HLRITGIH**	**EQKEVLEQMA**
37.	30024.m001746_SCL3	165	3.65e-10	**ALSARREGPP**	**HLRITGIH**	**QQKEVLDQMA**
12.	27568.m000253_LISCL	504	9.99e-10	**RLSSRPGGPP**	**KLRITGID**	**FPHPGFRPAE**
17.	28650.m000191_LISCL	528	1.47e-9	**RLSKREGGPP**	**KLRITGIE**	**LPQSGFRPGE**
16.	28650.m000190_LISCL	578	1.47e-9	**LLSMRDGGPP**	**KLRITGIE**	**LPQQGFRPAE**
14.	28650.m000187_LISCL	450	1.47e-9	**RLSQRPGGPP**	**KLRITGIE**	**LPQPGFRPAE**
15.	28650.m000189_LISCL	425	2.60e-9	**HLSTRPGGPP**	**KVRITGID**	**YPQPGFRPGE**
27.	29648.m001919_PAT1	325	6.99e-9	**TLANQPGKPP**	**HLRLTGID**	**DPESVQRSTG**
28.	29949.m000124_PAT1	314	7.58e-9	**AFAARPGGPP**	**RIRITGID**	**DSTSAYARGG**
34.	29910.m000940_Rc_GRAS	355	1.00e-8	**LVSRCDCPLE**	**HLKITAIG**	**TTSRELIENT**
25.	27613.m000642_PAT1	305	1.53e-8	**ALAARPGGPP**	**HVRLTGID**	**DSTSAYARGG**
20.	29929.m004746_Os4	281	3.09e-8	**LANRPDKKPR**	**CLRITGVG**	**NSAERLQALG**
3.	29807.m000482_DELLA	284	4.33e-8	**ALALRPGGPP**	**LLRLTGIG**	**PPSPDGRDSL**
23.	30131.m007029_Os43	463	4.92e-8	**ALAARPGGAP**	**FLRITGVG**	**SCIESVRETG**
21.	30147.m013794_Os4	301	6.74e-8	**LANRAGKPPC**	**RLRITAVG**	**LCVGRFQTIG**
19.	29728.m000844_Os19	229	6.74e-8	**SEKASSSNRI**	**SLRITGLG**	**RSLEELQETE**
24.	27529.m000047_PAT1	309	1.83e-7	**ALADRPGGPP**	**AIRITGVD**	**DPQSAYARGG**
2.	29692.m000540_DELLA	370	2.04e-7	**ALALRPGGPP**	**AFRLTGIG**	**PPSHDNSDHL**
1.	28677.m000055_DELLA	330	2.04e-7	**ALALRPGGPP**	**AFRLTGIG**	**PPQSNNTDAL**
4.	30170.m013590_DELLA	221	2.44e-7	**DLAARPGGPP**	**TIRISGIG**	**FPNHDNSDYL**
13.	28650.m000186_LISCL	425	2.92e-7	**DLSTRHGGPP**	**RLHITGIE**	**FPQPGFRPAE**
44.	29661.m000923_SHR	264	5.36e-7	**ALATRTDETP**	**HLRLTTIV**	**ASKTNGGGGG**
33.	29889.m003285_Rc_GRAS	348	6.32e-7	**LVSDFDCNLE**	**LLKITAVG**	**TTSKHLIKDT**

Table S2. *Cont.*

6.	29646.m001070_HAM	314	6.90e-7	**DHFCNKLTSP**	**VLRITAVV**	**TEDYAIQTQL**
9.	29908.m006159_HAM	251	7.43e-7	**VSRKDGPPTP**	**HLRITALS**	**RGGNSGKRSI**
41.	29872.m000537_SCR	217	8.06e-7	**ILASRSKKIR**	**SMRITGFG**	**SSSELLESTG**
40.	28492.m000479_SCR	291	8.06e-7	**ILATRMEGPP**	**HIRMTGMG**	**TSMDLLVETG**
22.	30169.m006306_Os4	309	8.74e-7	**TLASRPEGPP**	**KVRITGLI**	**NDHQNLLELE**
39.	29634.m002156_SCL4/7	374	1.03e-6	**LATRSAGRPL**	**SIRISGIP**	**APVLGKSPAA**
7.	29820.m000985_HAM	280	1.10e-6	**GYNQRHLQQI**	**TLKITAIK**	**WREEHPWRKL**
31.	29889.m003282_Rc_GRAS	252	1.50e-6	**ENVAEANRSH**	**LLKITAVE**	**TTSKHLIEET**
42.	30073.m002204_SCR	592	1.74e-6	**ILASRPGGPP**	**YVRLTGLG**	**TSIEALEATG**
45.	29706.m001281_SHR	306	1.86e-6	**LTRRSGGPPP**	**LVRITVIT**	**ATVESDQNTE**
35.	30076.m004651_Rc_GRAS	400	2.01e-6	**LAERQQRPLE**	**HLKVTALG**	**LTGKGKKIEE**
30.	29889.m003281_Rc_GRAS	210	2.49e-6	**LANRQECPIE**	**LLKISGVG**	**VKASRQRIED**
29.	30169.m006225_PAT1	382	3.78e-6	**LSERLNGKPA**	**TVKITAVA**	**DNSAEEKERL**
11.	30174.m008828_HAM	510	5.30e-6	**ELALRNGGVS**	**SLKITAFV**	**SPSHDEIELG**
46.	30156.m001710_SHR	184	3.18e-5	**ALAKRPEGPP**	**SLRITVPF**	**TRPQVPPWLN**
8.	29820.m000986_HAM	481	4.24e-5	**ETVKEKQSLY**	**KVRIGGEW**	**NNEMILEWRG**
32.	29889.m003284_Rc_GRAS	150	1.38e-4	**GSSRGLSTEE**	**VIRIAGAR**	**FIQSCWQAVD**

Motif 15

2.	29692.m000540_DELLA	54	5.80e-46	**IWEDEEAKGD**	**GGMDELLAVLGYKVRSSDMAEVAQKLEQLEEVMGNVQED**	**GLCQLASETV**
1.	28677.m000055_DELLA	37	5.73e-44	**EEEEQQQQDG**	**GGMDELLAVLGYKVRSSDMAEVAQKLEQLEMVMGIAQED**	**GISHLSDTVH**
3.	29807.m000482_DELLA	27	1.37e-27	**SSSSSITNKP**	**PEIDNLLAGAGYKVRSSDLRHVAQRLERLETAMLNSPSS**	**HLSVLASDTV**

Table S2. *Cont.*

			Motif 16			
						
28.	29949.m000124_PAT1	234	1.06e-19	GLVARLASSG	SSIYKSLRCKEPASADLLSYM	HILYEVCPYF
18.	29767.m000200_LISCL	425	1.34e-18	GLDARLAGTG	SQIYKGLVSKRTSAANVLKAY	HLYLAACPFR
25.	27613.m000642_PAT1	225	1.96e-18	GLVARLASSG	SSIYRALRCKEPASAELLSYM	HILYEVCPYF
12.	27568.m000253_LISCL	424	4.09e-18	GLEARMAGSG	TQIYKAFMSRPTTAADVLKAH	HLFLAACPFR
17.	28650.m000191_LISCL	448	4.59e-17	GLEARLAGTG	AQIYTALSSEKLSAADMLKAY	LAYISACPFN
27.	29648.m001919_PAT1	245	3.41e-16	GLAARMAASG	KYLYKALKCKEPPSSDRLAAM	QILFEICPCF
26.	28166.m001040_PAT1	256	5.11e-16	GLVARKESSG	NNIYHALRCREPESKDLLSYM	QILYEICPYL
24.	27529.m000047_PAT1	229	3.21e-15	GLRARVELSG	SKIYRALKCEAPVSSDLMTYM	GILFKICPYW
16.	28650.m000190_LISCL	498	3.62e-14	ARLAGSVTGM	QSFYTSLASRRRTAADILRAY	KTHLHACPFK
14.	28650.m000187_LISCL	370	3.37e-13	ALETRLAGTG	TPAYSPLLSSKTPVSDILKAY	QVYVKACPFK
13.	28650.m000186_LISCL	345	2.49e-12	GLEARLAGTG	TPGYAPAVNSTTSAAGMLKAY	HAYTTACPFQ
			Motif 17			
						
16.	28650.m000190_LISCL	278	2.77e-38	GDGIMGSSPS	EMVQNMFSDTDSVLQFKRGLEEASKFLPRASQLVIDLE	SNSFANGQKE
17.	28650.m000191_LISCL	230	1.95e-31	HDVMGSFESK	IVVPNFFSERELALQFQRGVEEANRFLPKENQLVIDLE	TNASIPEMKE
12.	27568.m000253_LISCL	211	4.65e-28	AADGLVDSPL	STISEIFSDSESILQFKKGFEEASKFLPNGSLFIDLES	TGLFLKDLRE
18.	29767.m000200_LISCL	206	9.34e-27	DGLVHSPNST	FPVPHWNNESQSISQFIKGVEEASKFLPNGDDLFRNIE	VNRFLFKEPK

Table S2. *Cont.*

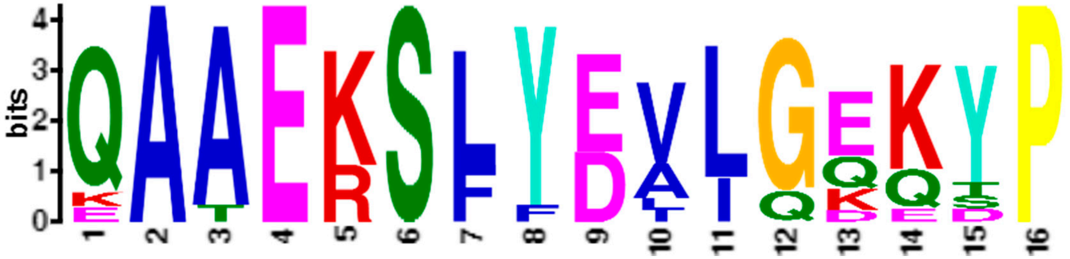
			Motif 18			
						
15.	28650.m000189_LISCL	97	3.50e-20	**PCMLQDCLAL**	**QAAEKSLYDVLGEKYP**	**PICDQSPSSI**
13.	28650.m000186_LISCL	110	8.30e-20	**NFMFEDCLAL**	**QAAEKSFYDVLGQKYP**	**ASLDQSPFLD**
18.	29767.m000200_LISCL	110	1.06e-19	**TCMLQDSLDL**	**QAAEKSFYEVLGKKYP**	**PSPEPKRVSI**
17.	28650.m000191_LISCL	112	2.48e-19	**PCMFHDPLAL**	**QAAERSLYDVLGEKYP**	**SSPNQSSSFG**
14.	28650.m000187_LISCL	105	1.44e-18	**TCMLQDCLAL**	**QAAEKSLYDVLGQEYP**	**HSLSHCPQIV**
12.	27568.m000253_LISCL	109	2.73e-18	**CMFQESSAAL**	**QAAEKSLYELIGEKYP**	**PSINYDSAAH**
16.	28650.m000190_LISCL	139	2.98e-15	**PPMYYDPLDL**	**KATEKSLYDVLGEQDP**	**SSLESPQPYI**
			Motif 19			
						
	Name	**Start**	***P*-Value**		**Sites**	
2.	29692.m000540_DELLA	97	6.38e-30	**GNVQEDGLCQ**	**LASETVHYNPSDLSTWLESMLSELNPN**	**PNFDPSQQPD**
1.	28677.m000055_DELLA	79	1.18e-29	**MGIAQEDGIS**	**HLSDTVHYNPSDLSGWVQSMLSELNNP**	**LDTIQNQQDS**
3.	29807.m000482_DELLA	70	1.20e-23	**LNSPSSHLSV**	**LASDTVLYNPSDLSSWVDSLLTEFNQS**	**QPLPSLPPDL**

Table S2. *Cont.*

Motif 20

16.	28650.m000190_LISCL	784	3.86e-15	**EKCRHKLKTW**	**YHKDFVIDEDN**	**NWMLQGWKGR**
12.	27568.m000253_LISCL	709	1.43e-14	**AAAKEKVNAL**	**YHKDFVIDEDS**	**RWLLQGWKGR**
14.	28650.m000187_LISCL	655	6.70e-14	**KKVRCTVRSE**	**YHKDFVVDENG**	**RWMLQGWKGR**
15.	28650.m000189_LISCL	629	1.72e-13	**VKRVRNIKND**	**YHKDFAVDEDG**	**HWMLMGWKGR**
17.	28650.m000191_LISCL	733	1.54e-12	**KKLKCRVKEG**	**YHNDFVVDQDG**	**QWMLQGWKGR**
13.	28650.m000186_LISCL	630	4.07e-11	**KKVITTVKSN**	**YNKNFIVDEDS**	**QWMLQGWKGR**
18.	29767.m000200_LISCL	709	4.78e-11	**KQAIEKVRKL**	**YHKNFLINEDG**	**RWLLQGWKGR**

Table S3. Information of all primers used in this study.

Gene Name	Forward (from 5′ to 3′)	Reverse (from 5′ to 3′)
28677.m000055	TCAAAAGCTTGAACAGCTTGAA	ACCAGGAATGGCTCTAAGATCA
29692.m000540	GGTTGGAAATTGGCTCAGTTAG	CGCTTCTTGCTCAACGATAGTA
29807.m000482	CATTTGTTGATGACATGTGCTG	GGACACGCCTCATAAAAGTGAT
30170.m013590	TTTCGGATTTAGCCAAGTCAAT	AAATATTGGGGGTAGAGCCTGT
30190.m011131	CAGGCTCCTTTCTCTCTGACAT	TCCACAACATTCTCACTTGGTC
29646.m001070	GAGGATTCCACTCCTACGCTAA	CTGCTCGGATAAGCTCTTGAAT
29820.m000985	TGGCTCTTTCTCAACAACAAAA	AGGCTAGCCATTCTTTTCTTCC
29820.m000986	CGGTCTCAAATTAAAGGTGGAG	CATCCCCATCTCCAAAAGTAAG
29908.m006159	ACTTGCAACTCAAACCCAAACT	TTGCAAGGCGTCAGTAAAATAA
29916.m000544	AAGAAAGGATGAATGGGCTACA	ATCTACAATCCCTAACCCAGCA
30174.m008828	CCTTGAATTCTGGTTCTTGGTC	GCTTCCAGTGATTCAAGTAGGC
27568.m000253	TAGCACAGAAGTGGGACACAGT	AGTAGTGGAAAACAGCCTCTCG
28650.m000186	ATTAGCACATTTCTTCGCCAAT	AGGCCATTGAAAACCATAAAGA
28650.m000187	ACAATGCACCATTCTTTGTCAC	TGATCTAGTGAGAGCTGCCTGA
28650.m000189	ATCTGCAGCCTTTTAGATCGAG	AGAAGAAGGGGATTGATCACAA
28650.m000190	ATCAAATGGTGGAAAGACTCGT	TAAAAGCTTTGCATTCCAGTGA
28650.m000191	AGGTGGTTGTGAAGGAAGAGAA	TGTAGTGCCTTGTTTGATCCAC
29767.m000200	TCGTAACATTGAGGTCAACAGG	TTACCCTCCCCAGCACTATAAA
29728.m000844	TGGCAATCGTTGATACAGATTC	AGCTGTGGCTACATTGTTCTCA
29929.m004746	ATCGAAGCTATGGAAGAAGCAG	AAGTAGCGTAAGCCGATCAGAC
30147.m013794	CGAGCTCTAAGTTTCGCAGAAT	TCTCCATGATTTTCACCTTCCT
30169.m006306	AATCCTCCAAGCAATCAAGAGA	GCCTCTCAATCCTATCACAACC
30131.m007029	AGCTGGATGGAGATGTTGAAGT	TGGACTCTGTCCTTTCCCTTTA
27529.m000047	GAGCAAATGGTGTCAGTCTCTG	AATCCTAGGCTCGTATTCCACA
27613.m000642	AGGATGGATCCAATCAAATCAC	AGAACTTCCTGAAGATGCCAAC
28166.m001040	TCCACCAGACAATCTAAAGCAA	TCTGCATGTACGAAAGCAAATC
29648.m001919	GTGAATTTTGCTTTCCAACTCC	TTTCAACATTCATCCTGTCCTG
29949.m000124	GCATTCGTATTACAGGCATTGA	TGGTTCTGAGTGCTGACACTTT
30169.m006225	TGTTTGCCAAAGAACATATTGC	TATTATCCGCAACAGCTGTGAT
29889.m003281	TTTTGAGCACATGAAGATGGAC	TCTTGGTGCAATTCTTCTTTGA
29889.m003282	CAAGCTGCTGAAATTCAAAATG	ACTGATCACAAAACTCGAGCAA
29889.m003284	TTCACTGCAATCCAAGAAATTG	TGACTGCCCTAAAAGAGAAAGG
29889.m003285	TGACTGCAATCTGGAGCTTTTA	AGAATTTAGCCTATCGGGCAGT
29910.m000940	TTTGCTGAAGCTCTCCATGATA	GTCCATTGCATTCCATATCTGA
30076.m004651	TATGTTCTGAATATGGCGCTTG	GTTGAGCAGCTCCAAAGAAGAT
29790.m000809	TGGGAAGTGAAGATAGGATGGT	CATGCCAACAAATCATCAAACT
30024.m001746	ACTTGTGGAAATCATGTTGCTG	TCAAGAATGGAAACATCTCGAA
30131.m007244	GCCTTGAGCATATCTCTCACCT	ATTGCTTCTACAATGGCCTGAT
29634.m002156	GTGAACATGGAGATCCAACTGA	AACGATCCCAAAATCCACTATG
28492.m000479	TGTTTCACATCCTGGCTACAAG	CCTGTTGCATCGTACAGTGAAT
29872.m000537	GAGACTCCTCGGTCTTTTGCTA	GGAAAGCGTTGAAGATTTTCTG
30073.m002204	AGCTACTTTGCTTCTTGGGATG	TCAACAAAATGGTATTGGCAAG
29661.m000901	CCACAAACTCATCAAATCCGTA	TCATACCATTGTCTTTGCTTGC
29661.m000923	TGTGGATGCTTAATGAACTTGG	TCAAATGCTTCCATTATTGCAC
29706.m001281	ATGAGGTTAGTCCTTGGTTTGC	ACTGAAAATGGGGTCTCAGTGT
30156.m001710	TCTTGGTAGTCTTGATGGAGCA	ACTCATTTGCCTCCTTTGGATA