Supplementary Materials

Table S1. Genes encoding for transcription factors participating in anthocyanin biosynthesis regulation in different plant species.

	MYC (bHLH)	**MYB**	**WD40**
Arabidopsis thaliana	*TT8* (Nesi *et al.*, 2000) *GL3/EGL3* (Bernhardt *et al.*, 2003; Heim *et al.*, 2003; Zhang *et al.*, 2003)	*TT2*, *CPC* (Borevitz *et al.*, 2000; Gonzalez *et al.*, 2008) *MYBL2* (Dubos *et al.*, 2008; Matsui *et al.*, 2008) *PAP1*, *PAP2* (Borevitz *et al.*, 2000)	*TTG1* (Walker *et al.*, 1999)
Petunia hybrida	*AN1*, *JAF13* (Llyod *et al.*, 1992; Quattrocchio *et al.*, 1998; Spelt *et al.*, 2000, 2002)	*AN2*, *AN4* (Quattrocchio *et al.*, 1999, 2006)	*AN11* (de Vetten *et al.*, 1997)
Antirrhinum majus	*Delila* (Gong *et al.*, 1999)	*Rosea1*, *Rosea2*, *Venosa*, *MYB308*, *MYB330* (Schwinn *et al.*, 2006)	not defined
Vitis vinifera	*MYC1*, *MYCA1* (Hichri *et al.*, 2010; Matus *et al.*, 2010)	*MYBA1, MYBA2*, *MYB5a* (Kobayashi *et al.*, 2002; Deluc *et al.*, 2006, 2008; Walker *et al.,* 2007; Cutanda-Perez *et al.*, 2009)	*WDR1*, *WDR2* (Matus *et al.*, 2010)
Zea mays	*B*, *R*, *Lc*, *Sn*, *In1* (Burr *et al.*, 1996; Chandler *et al.*, 1989; Ludwig *et al.*, 1989; Consonni *et al.*, 1993; Petroni *et al.*, 2000)	*C1*, *Pl1*, *P1* (Paz-Ares *et al.*, 1987; Chandler *et al.*, 1989; Goff *et al.*, 1990; Petroni *et al.*, 2000)	*PAC1* (Selinger and Chandler, 1999)
Oryza sativa	*R*, *Pl*, *Ra*, *Pb* (Hu *et al.*, 1996; 2000; Sakamoto *et al.*, 2001; Wang and Shu, 2007)	*OsC1*(Reddy *et al.*, 1998; Saitoh *et al.*, 2004)	not defined
Hordeum vulgare	*ANT2* (Cockram *et al.*, 2010)	not defined	not defined
Triticum aestivum	*TaMyc1* (current study)	*Mpc1* (Li *et al.*, 1999)	not defined

Table S2. PCR primers amplifying *Myc*-like gene sequences of wheat. e: exon, i: intron, UTR: untranslated region, TDN: touchdown, TDN ext: touchdown extended, *: primers designed from *T. aestivum* contigs 32064, 42144, 65805, 248535, 249890, 302985, 445995, 467773, 1280203, 1475001, 1815797, 1821237 and 4203206 found in www.cerealsdb.uk.net. Primer pairs used for cDNA sequencing are shown in gray color.

Primer Pair Number	**Purpose**	**Gene (Copy)**	**PCR Product Length (DNA/cDNA)**	**Forward Primer (FP), 5'→3'**	**Reverse Primer (RP), 5'→3'**	**PCR Conditions (Amplification Program/MgCl$_2$ Concentration, mM)**	**Gene Region Containing Primer Annealing Site**	
							Forward	**Reverse**
1	cloning	*TaMyc1-4*	373, 379, 382	gtggacaaggcatccatcctagc	tcttgagagcgaggaggccg	60 grad^1/1.5	e8	e8
2	sequencing	*TaMyc1*	453/-	ataattgcatcggcaggc *	gaactaagaagtaagctagccatgac *	TDNext^2/1.8	5' region	i1
3	sequencing	*TaMyc1*	640/228	gctccatcttcctccccg	cgccgttgtagaacccgt	TDN^2/1.0	e1	e3
4	sequencing	*TaMyc1*	491/-	gtcatggctagcttacttcttagttc *	cacaacaaacggccggt *	55 grad^1/1.8	i1	i2
5	sequencing	*TaMyc1*	296/-	taccggccgtttgttgt *	tgttcttgagatacataccttg *	TDNext^2/1.8	i2	e3i3
6	sequencing	*TaMyc1*	393/262	tcaccagctcggcggaca *	gcgcactgagcattgcacaa *	TDN^2/1.8	e3	e4
7	sequencing	*TaMyc1*	600/-	gagcaacgagcatgtttggt *	atcgggtgcagattagagagtg *	TDNext^2/1.8	e4	i4
8	sequencing	*TaMyc1*	147/-	acgtgtagccgcatccttgg *	ccggcagaggtagcatgcat *	TDN^2/1.8	i4	i4
9	sequencing	*TaMyc1*	245/-	atggcgcccatgcatgc *	aaggagaacatcgtgtgcttcatc *	TDN^2/1.8	i4	i6
10	sequencing	*TaMyc1*	802/-	tgagttttcgtcccatgatga *	catgagatttgcccctgtaag *	TDNext^2/1.8	i6	i6
11	sequencing	*TaMyc1*	687/-	cttacaggggcaaatctcatg *	gagaactggaaaaactcatggac *	TDNext^2/1.8	i6	i6
12	sequencing	*TaMyc1*	492/-	aaatcagtccatgagtttttcca *	cgtgattcgctcaaggttgt *	TDN^2/1.8	i6	e7
13	sequencing	*TaMyc1*	534/-	gatacccggggaacttgagctag *	ttactttttggtggtgtgcgtgt *	TDNext^2/1.8	e7	i7
14	sequencing	*TaMyc1*	283/177	aaccatgtcatttcggagagga *	ggccgccctgttggatc	TDN^2/1.8	e7	e8

Table S2. *Cont.*

Primer Pair Number	Purpose	Gene (Copy)	PCR Product Length (DNA/cDNA)	Forward Primer (FP), 5'→3'	Reverse Primer (RP), 5'→3'	PCR Conditions (Amplification Program/$MgCl_2$ Concentration, mM)	Gene Region Containing Primer Annealing Site	
							Forward	**Forward**
15	sequencing	*TaMyc1*	422/331	acgacggcctgagcagtg	atgaagggttgccgatagcc *	TDN[2]/1.8	e8	3UTR
16	5’RACE	*TaMyc1*	466/332	agtagttcgtccatgccag	ggtcctcaggcgacag	MINTa[3], 55°C, 29 cycles	e2	e3
17		*TaMyc1*	-/151	(primer for control)	ccacgtcagaacccc	MINTa[3], 53°C, 26 cycles		e2e3
18	3’RACE	*TaMyc1*	531/440	1FP	agtgcttcgctaatcatc	MINTa[3], 60°C, 24 cycles	e8	e9
19		*TaMyc1*	407/316	gcgggaagaaggtgttag	(primer for control)	MINTa[3], 55°C ,20 cycles	e8	
20	mapping expression	*TaMyc1*	283/177	13F	13R	TDN[2]/1.8	e7	e8
21	mapping expression	*TaMyc2*	330/220	13F	tcttcccgccgacttcatga	TDN[2]/1.5	e7	e8
22	mapping expression	*TaMyc3*	347/198	13F	gagttttcggacggctgttg	TDN[2]/1.8	e7	e8
23	mapping expression	*TaMyc4*	341/188	13F	acggctgttccggcca	TDN[2]/1.8	e7	e8

[1] The amplification was initiated by a denaturing step (94 °C/2 min), followed by 45 cycles (35 cycles in **55 grad** program) of 94 °C/15 s, 60 °C (55 °C in **55 grad** program)/30 s, 72 °C/60 s, and completed with a final extension step of 72 °C/5 min; [2] The amplification was initiated by a denaturing step (94 °C/2 min), followed by 13 cycles of 94 °C/15 s, 65 °C/30 s (decreasing by 0.7 °C/cycle), 72 °C/45 s (2 min in **TDNext** program), 24 cycles of 94 °C/15 s, 56 °C/30 s, 72 °C/45 s (2 min in **TDNext** program); and a final extension of 72 °C/5 min; [3] The amplification program was as in a manual to a Mint RACE primer set (Evrogen, Moscow, Russia) with annealing temperature and numbers of cycles, established empirically (pointed in column “PCR Conditions”).

Table S3. Sequence similarity between *TaMyc1* and its three related copies.

	TaMyc1	***TaMyc2***	***TaMyc3***
TaMyc2	87.61% 2 in/dels (6+3bp)	-	-
TaMyc3	89.97% 1 in/del (3bp)	86.73% 3 in/del (3+6+3 bp)	-
TaMyc4	91.45% 1 in/del (3bp)	87.32% 3 in/del (3+6+3 bp)	95.83% 0 in/del

Table S4. Fold differences in transcript *TaMyc1* abundance between test genotypes in various parts of the wheat plant. *: differences statistically significant at $p \leq 0.05$.

Comparable Genotypes	**Pericarp**	**Culm**	**Leaf**	**Coleoptile**	**Root**
“i:S29*Pp-A1Pp-D1Pp3*^{P}”/“Saratovskaya 29”	1446.31 *	18.79 *	35.54 *	61.12 *	47.87 *
“i:S29*Pp-A1Pp-D1Pp3*^{PF}”/“Saratovskaya 29”	1492.27 *	6.81 *	2.59 *	100.82 *	30.79 *
“i:S29*Pp-A1Pp-D1Pp3*^{P}”/“i:S29*Pp-A1Pp-D1Pp3*^{PF}”	0.97	2.76 *	13.70 *	0.61	1.55 *

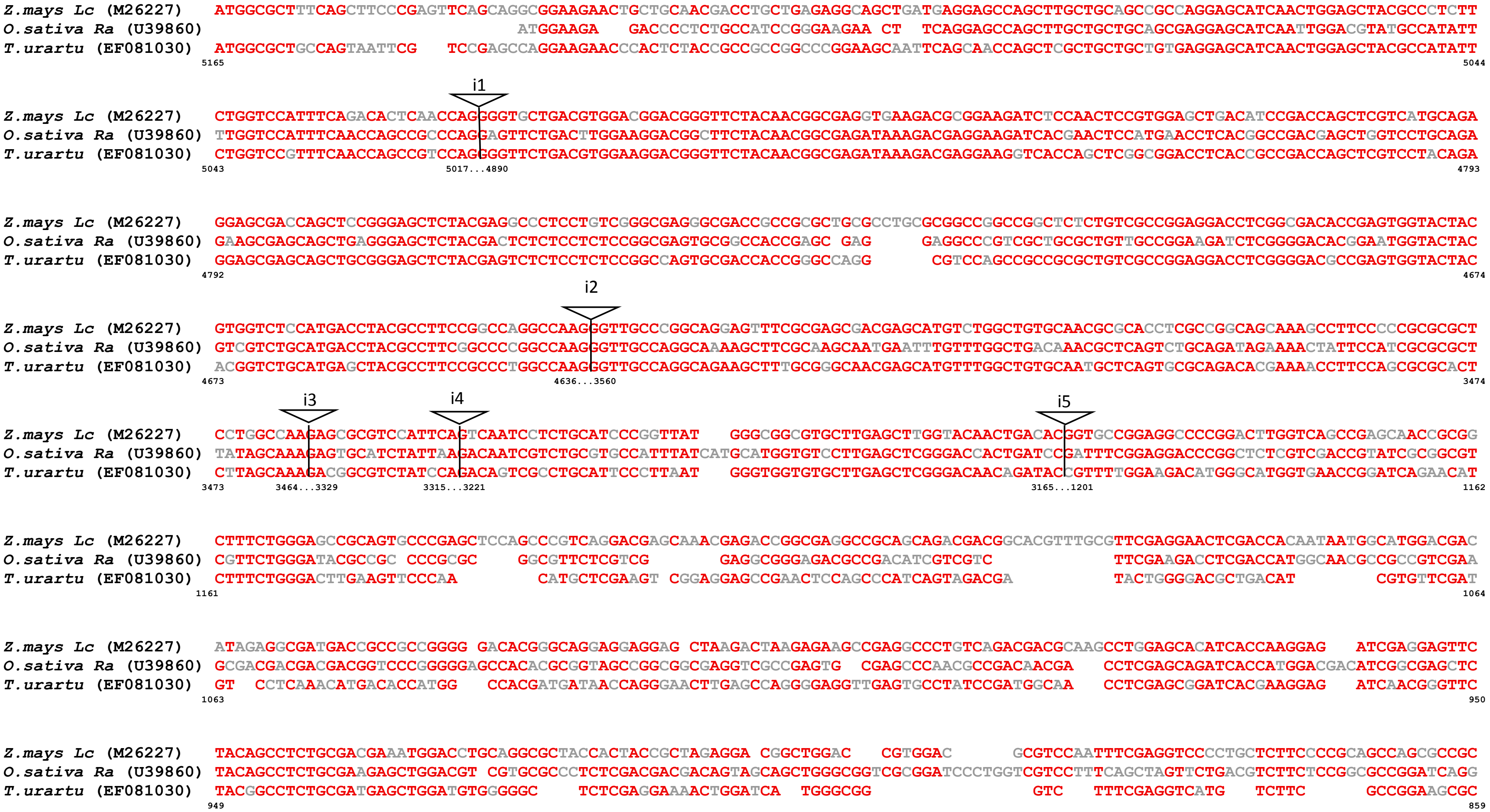
Table S5. Fold differences in transcript *TaMyc1* abundance between genotypes marked in the table line to the genotypes marked in the table row. *: differences significant at $p \leq 0.05$.

	Saratovskaya29 i:S29*Pp-A1pp-D1pp3*	**i:S29*Pp-A1Pp-D1Pp3*^{P}**	**i:S29*Pp-A1pp-D1Pp3*^{P}**	**i:S29*Pp-A1Pp-D1pp3*^{P}**
i:S29*pp-A1pp-D1pp3*	3.31 *	197.82 *	476.45 *	1.67 *
Saratovskaya29 i:S29*Pp-A1pp-D1pp3*	-	59.76 *	143.93 *	-
i:S29*Pp-A1Pp-D1pp3*^{P}	1.98 *	118.63 *	285.71 *	-
i:S29*Pp-A1Pp-D1Pp3*^{P}	-	-	2.41 *	-

Table S6. Fold differences in transcript *TaMyc1* abundance between genotypes marked in the table line to the genotypes marked in the table row. * differences significant at $p \leq 0.05$.

	Saratovskaya29 i:S29*Pp-A1pp-D1pp3*	**i:S29*Pp-A1Pp-D1Pp3*^{PF}**	**i:S29*Pp-A1pp-D1Pp3*^{PF}**	**i:S29*Pp-A1Pp-D1pp3*^{PF}**
i:S29*pp-A1pp-D1pp3*	3.31 *	80.55 *	150.01 *	3.04 *
Saratovskaya29 i:S29*Pp-A1pp-D1pp3*	-	24.33 *	45.32 *	-
i:S29*Pp-A1Pp-D1pp3*^{PF}	1.09	26.46 *	49.28 *	-
i:S29*Pp-A1Pp-D1Pp3*^{PF}	-	-	1.86	-

Figure S1. Multiple alignment of the coding regions of maize *Lc*, rice *Ra* and the *T. urartu Myc*-like gene. Intron positions are marked by triangles, its localizations were predicted by comparison of the mRNA sequences with the corresponding rice (AL606682) and maize (DQ414252) genomic sequences with determined gene structures. The sites of the primers forming primer pair 1 (Table S2) are underlined.



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Z.mays Lc (M26227)    ATGGCGCTTTCAGCTTCCCGAGTTCAGCAGGCGGAAGAACTGCTGCAACGACCTGCTGAGAGGCAGCTGATGAGGAGCCAGCTTGCTGCAGCCGCCAGGAGCATCAACTGGAGCTACGCCCTCTT
O.sativa Ra (U39860)                                ATGGAAGA   GACCCCTCTGCCATCCGGGAAGAA CT  TCAGGAGCCAGCTTGCTGCTGCAGCGAGGAGCATCAATTGGACGTATGCCATATT
T.urartu (EF081030)   ATGGCGCTGCCAGTAATTCG   TCCGAGCCAGGAAGAACCCACTCTACCGCCGCCGGCCCGGAAGCAATTCAGCAACCAGCTCGCTGCTGCTGTGAGGAGCATCAACTGGAGCTACGCCATATT
                     5165                                                                                                                      5044

                                                i1
Z.mays Lc (M26227)    CTGGTCCATTTCAGACACTCAACCAGGGGTGCTGACGTGGACGGACGGGTTCTACAACGGCGAGGTGAAGACGCGGAAGATCTCCAACTCCGTGGAGCTGACATCCGACCAGCTCGTCATGCAGA
O.sativa Ra (U39860)  TTGGTCCATTTCAACCAGCCGCCCAGGAGTTCTGACTTGGAAGGACGGCTTCTACAACGGCGAGATAAAGACGAGGAAGATCACGAACTCCATGAACCTCACGGCCGACGAGCTGGTCCTGCAGA
T.urartu (EF081030)   CTGGTCCGTTTCAACCAGCCGTCCAGGGGTTCTGACGTGGAAGGACGGGTTCTACAACGGCGAGATAAAGACGAGGAAGGTCACCAGCTCGGCGGACCTCACCGCCGACCAGCTCGTCCTACAGA
                     5043                    5017...4890                                                                                       4793

Z.mays Lc (M26227)    GGAGCGACCAGCTCCGGGAGCTCTACGAGGCCCTCCTGTCGGGCGAGGGCGACCGCCGCGCTGCGCCTGCGCGGCCGGCCGGCTCTCTGTCGCCGGAGGACCTCGGCGACACCGAGTGGTACTAC
O.sativa Ra (U39860)  GAAGCGAGCAGCTGAGGGAGCTCTACGACTCTCTCCTCTCCGGCGAGTGCGGCCACCGAGC GAG     GAGGCCCGTCGCTGCGCTGTTGCCGGAAGATCTCGGGGACACGGAATGGTACTAC
T.urartu (EF081030)   GGAGCGAGCAGCTGCGGGAGCTCTACGAGTCTCTCCTCTCCGGCCAGTGCGACCACCGGGCCAGG      CGTCCAGCCGCCGCGCTGTCGCCGGAGGACCTCGGGGACGCCGAGTGGTACTAC
                     4792                                                                                                                      4674

                                                           i2
Z.mays Lc (M26227)    GTGGTCTCCATGACCTACGCCTTCCGGCCAGGCCAAGGGTTGCCCGGCAGGAGTTTCGCGAGCGACGAGCATGTCTGGCTGTGCAACGCGCACCTCGCCGGCAGCAAAGCCTTCCCCCGCGCGCT
O.sativa Ra (U39860)  GTCGTCTGCATGACCTACGCCTTCGGCCCCGGCCAAGGGTTGCCAGGCAAAAGCTTCGCAAGCAATGAATTTGTTTGGCTGACAAACGCTCAGTCTGCAGATAGAAAACTATTCCATCGCGCGCT
T.urartu (EF081030)   ACGGTCTGCATGAGCTACGCCTTCCGCCCTGGCCAAGGGTTGCCAGGCAGAAGCTTTGCGGGCAACGAGCATGTTTGGCTGTGCAATGCTCAGTGCGCAGACACGAAAACCTTCCAGCGCGCACT
                     4673                              4636...3560                                                                             3474

                               i3             i4                                                          i5
Z.mays Lc (M26227)    CCTGGCCAAGAGCGCGTCCATTCAGTCAATCCTCTGCATCCCGGTTAT   GGGCGGCGTGCTTGAGCTTGGTACAACTGACACGGTGCCGGAGGCCCCGGACTTGGTCAGCCGAGCAACCGCGG
O.sativa Ra (U39860)  TATAGCAAAGAGTGCATCTATTAAGACAATCGTCTGCGTGCCATTTATCATGCATGGTGTCCTTGAGCTCGGGACCACTGATCCGATTTCGGAGGACCCGGCTCTCGTCGACCGTATCGCGGCGT
T.urartu (EF081030)   CTTAGCAAAGACGGCGTCTATCCAGACAGTCGCCTGCATTCCCTTAAT   GGGTGGTGTGCTTGAGCTCGGGACAACAGATACCGTTTTGGAAGACATGGGCATGGTGAACCGGATCAGAACAT
                     3473   3464...3329   3315...3221                                                 3165...1201                              1162

Z.mays Lc (M26227)    CTTTCTGGGAGCCGCAGTGCCCGAGCTCCAGCCCGTCAGGACGAGCAAACGAGACCGGCGAGGCCGCAGCAGACGACGGCACGTTTGCGTTCGAGGAACTCGACCACAATAATGGCATGGACGAC
O.sativa Ra (U39860)  CGTTCTGGGATACGCCGC CCCGCGC    GGCGTTCTCGTCG       GAGGCGGGAGACGCCGACATCGTCGTC            TTCGAAGACCTCGACCATGGCAACGCCGCCGTCGAA
T.urartu (EF081030)   CTTTCTGGGACTTGAAGTTCCCAA        CATGCTCGAAGT CGGAGGAGCCGAACTCCAGCCCATCAGTAGACGA          TACTGGGACGCTGACAT         CGTGTTCGAT
                    1161                                                                                                                       1064

Z.mays Lc (M26227)    ATAGAGGCGATGACCGCCGCCGGGG GACACGGGCAGGAGGAGGAG CTAAGACTAAGAGAAGCCGAGGCCCTGTCAGACGACGCAAGCCTGGAGCACATCACCAAGGAG   ATCGAGGAGTTC
O.sativa Ra (U39860)  GCGACGACGACGACGGTCCCGGGGGAGCCACACGCGGTAGCCGGCGGCGAGGTCGCCGAGTG  CGAGCCCAACGCCGACAACGA   CCTCGAGCAGATCACCATGGACGACATCGGCGAGCTC
T.urartu (EF081030)   GT  CCTCAAACATGACACCATGG   CCACGATGATAACCAGGGAACTTGAGCCAGGGGAGGTTGAGTGCCTATCCGATGGCAA   CCTCGAGCGGATCACGAAGGAG   ATCAACGGGTTC
                     1063                                                                                                                       950

Z.mays Lc (M26227)    TACAGCCTCTGCGACGAAATGGACCTGCAGGCGCTACCACTACCGCTAGAGGA CGGCTGGAC   CGTGGAC      GCGTCCAATTTCGAGGTCCCCTGCTCTTCCCCGCAGCCAGCGCCGC
O.sativa Ra (U39860)  TACAGCCTCTGCGAAGAGCTGGACGT CGTGCGCCCTCTCGACGACGACAGTAGCAGCTGGGCGGTCGCGGATCCCTGGTCGTCCTTTCAGCTAGTTCTGACGTCTTCTCCGGCGCCGGATCAGG
T.urartu (EF081030)   TACGGCCTCTGCGATGAGCTGGATGTGGGGGC    TCTCGAGGAAAACTGGATCA  TGGGCGG                GTC   TTTCGAGGTCATG   TCTTC      GCCGGAAGCGC
                     949                                                                                                                        859
```

Figure S1. *Cont.*

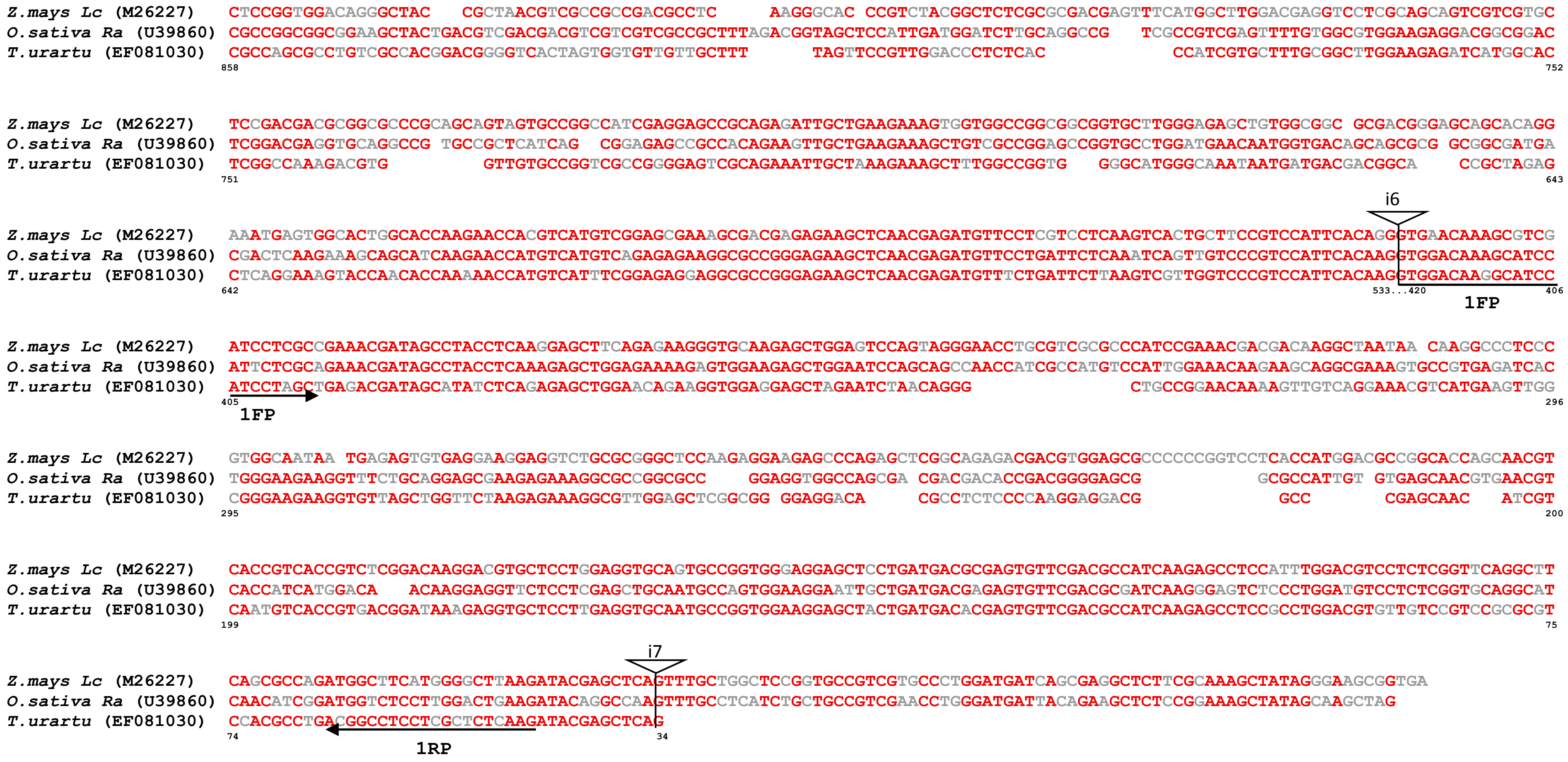

Figure S2. *TaMyc1* structure and the placement of the overlapping amplicons used to derive the gene's full sequence. Primers used for 5′- and 3′-RACE shown in red.

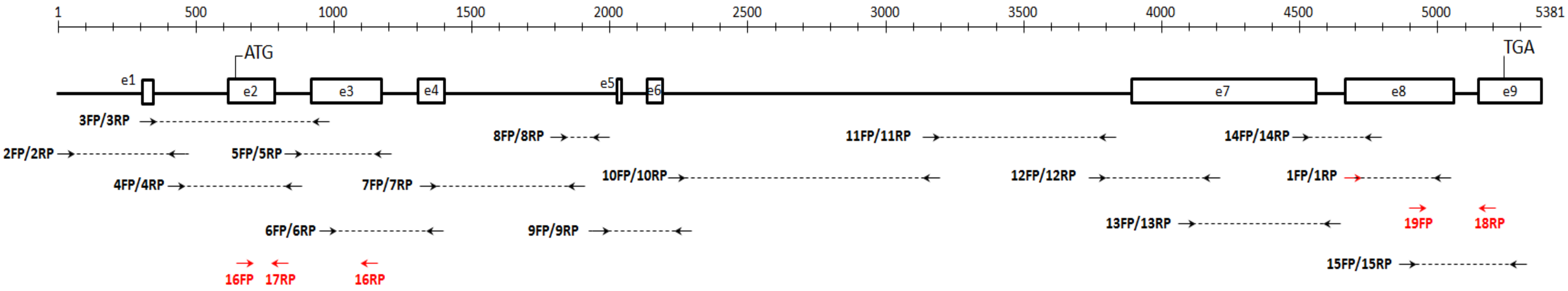

Figure S3. Alignment of wheat *Myc*-like sequences obtained by amplification with primer pair 1 (Table S2).

```
TaMyc1            TGAGACGATAACCTATCTCAGAGAGCTCGAACAGAAGGTGGAGGAGCTAGGATCCAACAGGGCGGCCAGAACAACAGCTG
TaMyc2            TGAGACGATAGCATATCTCAGAGAGCTGGAACAGAAGGTGGAGGAGCTAGAATCTAACAAGGCTGCCGGAACAACAGTTG
TaMyc3            TGAAACGATAGCCTACCTCAGAGAGCTGGAGCAGAAGGTGGAGGAGCTAGAATCCAACAGGGCGGCCG   CAACAGCCG
TaMyc4            TGAAACGATAGCCTACCTCAGAGAGCTGGAGCAGAAGGTGGAGGAGCTAGAATCCAACAGGGTGGCCG   GAACAGCCG
CONSENSUS         TGAGACGATAGCCTATCTCAGAGAGCTGGAACAGAAGGTGGAGGAGCTAGAATCCAACAGGGCGGCCGGAACAACAGCTG
                  *** ****** * ** *********** ** ******************* *** **** **  ***     *****  *

TaMyc1            TCAGAAAACGCCATGAAGTCGGCGGGAAGAAGGTGTTAGCTCGTTCTAAGAGAAAGGCATCAGAGCTCGGCGGGGACGAC
TaMyc2            TCAGGAAACGTCATGAAGTCGGCGGGAAGAAGGTGTTAGCTGGTTCTAAGAGAAAGGCGTCGGAGCTCGGCGGGGAGGAC
TaMyc3            TCCGAAAACTCCATGACGTCAGCGGGAAGAAGGTGTTAGCTGGTTCCAAGAGAAAGGCGTCGGAGCTCGGCGGGGATGAC
TaMyc4            TCCGAAAACTCCATGACGTCAGTGGGAAGAAGGTGTTAGCTGGTTCCAAGAGAAAGGCGTCGGAGCTCGGCGGGGACGAC
CONSENSUS         TCAGAAAACGCCATGAAGTCGGCGGGAAGAAGGTGTTAGCTGGTTCTAAGAGAAAGGCGTCGGAGCTCGGCGGGGA.GAC
                  ** * ****  ***** *** * ****************** **** *********** ** ************** ***

TaMyc1            ACGGAGAGGGTGCTCCCCAAGGACGACGGCCTGAGCAGTGTCATCAACGTCACCGTGACTGACAACGAGGTGCTCCTGGA
TaMyc2            ACGCCT      CTCCCCAAGGA   CGGCCCGAGCAACATCGTCAATGTCACCGTGACGGACAAAGAGGTGCTCCTTGA
TaMyc3            GCGGACAGGGTGCTCTCCAAGGAGGACGTCCCGAGCAACGTCGTCAACGTCACCGTGACGGAAAAAGAGGTGCTCCTGGA
TaMyc4            ACGGAGAGGGTGCTCCCCAAGGACGACGGCCCGAGCAACATCGTCAACGTCACCGTGACGGACAAAGAGGTGCTCCTGGA
CONSENSUS         ACGGA.AGGGTGCTCCCCAAGGA.GACGGCCCGAGCAACATCGTCAACGTCACCGTGACGGACAAAGAGGTGCTCCTGGA
                   **         *** *******   ** ** *****   ** **** *********** ** ** *********** **

TaMyc1            GGTGCAATGCCGGTGGAAGGAGCTGCTGATGACACAAGTGTTCGACGCCATCAAGAGCCTCCGCCTGGACGTGCTCTCCG
TaMyc2            GGTGCAATGCCGGTGGAAGGAGCTACTGATGACACAAGTGTTCGACGCCATCAAGAGCCTCCGCCTGGACGTGTTGTCCG
TaMyc3            GGTGCAATGCCGGTGGAAGGAGCTGCTCATGACACAAGTGTTCGACGCCATCAAGAGCCTCCGCCTGGACGTGCTCTCCG
TaMyc4            GGTGCAATGCCGGTGGAAGGAGCTGCTGATGACGCAAGTGTTCGACGCCATCAAGAGCCTCCGCCTGGACGTGCTCTCCG
CONSENSUS         GGTGCAATGCCGGTGGAAGGAGCTGCTGATGACACAAGTGTTCGACGCCATCAAGAGCCTCCGCCTGGACGTGCTCTCCG
                  ************************ ** ***** *************************************** * ****

TaMyc1            TGCGCGCGTCGACGCCCGA
TaMyc2            TCCGCGCGTCCACGCCTGA
TaMyc3            TGCGCGCGTCCACGCCCGA
TaMyc4            TGCGCGCGTCGACGCCCGA
CONSENSUS         TGCGCGCGTCCACGCCCGA
                  * ******** ***** **
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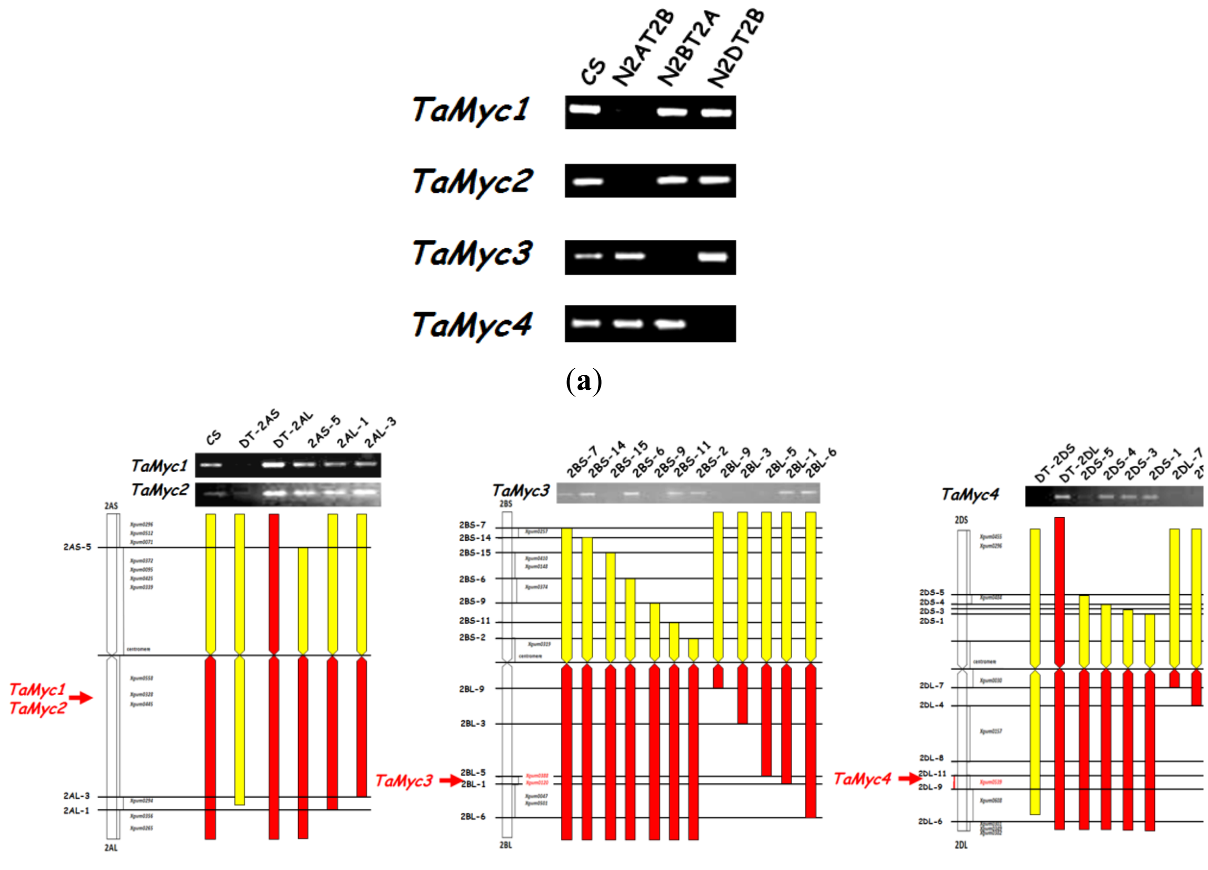
Figure S4. Physical mapping of the *TaMyc1-4* gene copies using "Chinese Spring" (CS) nulli-tetrasomic (**a**) and ditelosomic and deletion lines (**b**).



(**a**)

(**b**)

Figure S5. Alignment of maize, rice, wheat, barley, and *Arabidopsis* proteins participating in anthocyanin synthesis.

```
Wheat TaMYC1 (KJ747954)       MALPVVRPCQEEPTLPPPTGTQF SNQLAAAVRSINWSYAIFWSIS TSRPGVLTWKDGFYNGEIKTRKV
Rice RA (U39860)                         MEETPLPSGKNF RSQLAAAARSINWTYAIFWSIS TSRPGVLTWKDGFYNGEIKTRKI
Maize B (X57276)              MALSASPAQ  EELLQ PAGRPL RKQLAAAARSINWSYALFWSISSTQRPRVLTWTDGFYNGEVKTRKI
Maize LC (M26227)             MALSASRVQQAEELLQRPAERQLMRSQLAAAARSINWSYALFWSISDTQ PGVLTWTDGFYNGEVKTRKI
Barley ANT2(HM370319)          MALPIVRPSQEEP    PTGKQF SYQLAAAVRSINWSYAIFWSIS TSRPGVLTWKDGFYNGEIKTRKV
Arabidopsis TT8 (AJ277509)        MDESSIIPAEKVAGAEKKELQGLLKTAVQSVDWTYSVFWQFCPQQR  VLVWGNGYYNGAIKTRKT

Wheat TaMYC1 (KJ747954)       TSSADITADQLVLQRSEQLRELYESLLSGQCDHRAR  RPAAALSPEDLGDAEWYYTVCMGYAFRPGQGL
Rice RA (U39860)              TNSMNLTADELVLQRSEQLRELYDSLLSGECGHRAR  RPVAALLPEDLGDTEWYYVVCMTYAFGPGQGL
Maize B (X57276)              SHSVELTADQLLMQRSEQLRELYEALRSGECDRRGA  RPVGSLSPEDLGDTEWYYVICMTYAFLPGQGL
Maize LC (M26227)             SNSVELTSDQLVMQRSDQLRELYEALLSGEGDRRAAPARPAGSLSPEDLGDTEWYYVVSMTYAFRPGQGL
Barley ANT2(HM370319)          TSSADLTADQLLLQRSEQLRELYQSLLSGQCDHRGR  RPAAALSPEDLGDAEWYYAVCMSYAFRPGQGL
Arabidopsis TT8 (AJ277509)    TQPAEVTAEEAALERSQQLRELYETLLAGESTSEA   RACTALSPEDLTETEWFYLMCVSFSFPPPSGM

Wheat TaMYC1 (KJ747954)       PGRSFASNEHVWLCNAQCADTKTFQRALLAKTASIQTVACIP LMGGVLELGTTNTVLEDKGMVNWIGTS
Rice RA (U39860)              PGKSFASNEFVWLTNAQSADRKLFHRALIAKSASIKTIVCVPFIMHGVLELGTTDPISEDPALVDRIAAS
Maize B (X57276)              PGRSSASNEHVWLCNAHLAGSKDFPRALLAKSASIQTIVCIP LMGGVLELGTTDKVPEDPDLVSRATVA
Maize LC (M26227)             PGRSFASDEHVWLCNAHLAGSKAFPRALLAKSASIQSILCIP VMGGVLELGTTDTVPEAPDLVSRATAA
Barley ANT2(HM370319)          PGRSFASNEPVWLCNAQCADTKTFQRSLLAKTTSIQTVACIP LMGGVLELGTTDTVLEDRDMVNRISTS
Arabidopsis TT8 (AJ277509)    PGKAYARRKHVWLSGANEVDSKTFSRAILAKSAKIQTVVCIP MLDGVVELGTTKKVREDVEFVELTKSF

Wheat TaMYC1 (KJ747954)       FWELKFPTCSKSEEPNSIPSVDDTGDADIVFDVLNHNTM    AMMIPG    ELELGEVECLS   DDN
Rice RA (U39860)              FWDTP         PRAAFSSEAGDADIVVFEDLDHGNAAVEATTTTVPGEPHAVAGGEVAECEPNADND
Maize B (X57276)              FWEPQCPTYSKEPSSNPSAYETGEAAYIVVLEDLDHNAMDMETVTAAAGRHGTGQELGEVESPS   NAS
Maize LC (M26227)             FWEPQCPSSSPSGRANETGEAAADDGTFAFEELDHNNGMDDIEAMTAAGGHGQEEELRLREAEALSDDAS
Barley ANT2(HM370319)         FWDLKIPTSSKPKEPSS PSADDAGEADIVFQDLDHNTM    AAMIPG    ELELGEVECLS   DDN
Arabidopsis TT8 (AJ277509)    FYDHC        KTNPKPALSEHSTYEVHEEAEDEEEVEEEMTMSE      EMRLGSPDDEDVSNQNL

Wheat TaMYC1 (KJ747954)       LERITKE INRFYGLYDELDVGA    LEENWTMGG  C FE IMSSPEVP   PAPAATNGITNGAVTL
Rice RA (U39860)              LEQITMDDIGELYSLCEELDVVRPLDDDSSSWAVADPWSSFQLVLTSSPAPDQAPAAEATDVDDVVVAAL
Maize B (X57276)              LEHITKG IDEFYSLCEEMDVQ    PLEDAWIMDG  SNFE VPSSA                 LPVDG
Maize LC (M26227)             LEHITKE IEEFYSLCDEMDLQALPLPLEDGWTVDA  SNFE VPCSSPQP   APPPVDRATANVAADA
Barley ANT2(HM370319)         LERITKE INGFYGLCDELDVGA    LDENWIIGG  S FE VMSSPEAP   PAPAATGGITDGIVTL
Arabidopsis TT8 (AJ277509)    HSDLH   IESTHTLDTHMDMMNL   MEEGGNYS   QTVTTLLMSHP          TSLLSDSVSTY

Wheat TaMYC1 (KJ747954)       SSVEP  S   RSSCFTAWKRSWD  SAEDMAT     LVARETQKLLKKALAGG AWANNGGDD  TAR
Rice RA (U39860)              DGSSIDGSCRPSPSSFVAWKRTAD  SDEVQAVP   LISGEPPQKLLKKAVAGAGAWMNNG DSSAAAM
Maize B (X57276)              SSAPADGS   RATSFVVWTRSSH  SCSGEAA    VPVIEEPQKLLKKALAGGGAWANTNCGGGGTTV
Maize LC (M26227)             SRAPVYGS   RATSFMAWTRSSQQSSCSDDAAPAAVVPAIEEPQRLLKKVVAGGGAWESCG GATGAAQ
Barley ANT2(HM370319)         SAAAS  S   LSSCFTAWKRSWD  SAEDMAA     PVAGQSQKLLKKALAGG VWAINGGGGGGTAR
Arabidopsis TT8 (AJ277509)    SYIQ         SSFATWRVENGKEHQQVKTAP        SSQWVLKQMIFRVPFLHDN      TKD

Wheat TaMYC1 (KJ747954)       AQESTNTKNHVISERRRREKLNEMFLILKSLVPSIHKVDKASILAETITYLRELEQKVEELGSNRAART
Rice RA (U39860)              TTQESSIKNHVMSERRRREKLNEMFLILKSVVPSIHKVDKASILAETIAYLKELEKRVEELESSSQPSPC
Maize B (X57276)              TAQENGAKNHVMSERKRREKLNEMFLVLKSLVPSIHKVDKASILAETIAYLKELQRRVQELESRRQ
Maize LC (M26227)             EMSGTGTKNHVMSERKRREKLNEMFLVLKSLLPSIHRVNKASILAETIAYLKELQRRVQELESSREPASR
Barley ANT2(HM370319)         AQESSNTKNHVISERRRREKLNEMFLILKSLVPSIHKVDKASILAETIAYLRELEQRVEELESNRAPSRP
Arabidopsis TT8 (AJ277509)    KRLPREDLSHVVAERRRREKLNEKFITLRSMVPFVTKMDKVSILGDTIAYVNHLRKRVHELENT

Wheat TaMYC1 (KJ747954)         TAV        RKRHEVGGKKVLARS  KRKASELGGDDTER  VLPKDDGLSSVINVTVTDNEVLLE
Rice RA (U39860)              PLETRSR      RKCREITGKKVSAGAKRKAPAPEVASDDDTDG   ERRHCVSNVNVTIMDNKEVLLE
Maize B (X57276)                            GGSGCVSKKVCVGSNSKRKSPEFAGGAKEHPWVLPMD GTSNV TVTVSDTNVLLE
Maize LC (M26227)             PSETTTRLITRPSRGNNESVRKEVCAGS  KRKSPELGRDDVERPPVLTMDAGTSNV TVTVSDKDVLLE
Barley ANT2(HM370319)         AGAAV        RRHHDAAAKKMLAGS  KRKASELGGDD           GPNSVVNVTVTEKEVLLE
Arabidopsis TT8 (AJ277509)                   HHEQQHKRTRTC   KRKTSE                    EVEVSIIENDVLLE

Wheat TaMYC1 (KJ747954)       VQCRWKELLMTQVFDAIKSLRLDVLSVRASTPDDLLALKIRAQFAGPGVVETGMISEALQRAIRRP
Rice RA (U39860)              LQCQWKELLMTRVFDAIKGVSLDVLSVQASTSDGLLGLKIQAKFASSAAVEPGMITEALRKAIAS
Maize B (X57276)              VQCRWEKLLMTRVFDAIKSLHLDALSVQASAPDGFMRLKIGAQFAGSGAVVPGMISQSLRKAIGKR
Maize LC (M26227)             VQCRWEELLMTRVFDAIKSLHLDVLSVQASAPDGFMGLKIRAQFAGSGAVVPWMISEALRKAIGKR
Barley ANT2(HM370319)         VQCRWKELLMTQVFDAIKSLRLDVLSVRASTPDGLLALKIRAQFAGPGAVEPGMIIGALQTATRGR
Arabidopsis TT8 (AJ277509)    MRCEYRDGLLLDILQVLHELGIETTAVHTSVNDHDFEAEIRAKVRGKKASIAEVKRAIHQVIIHDTNL
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