Supplemental Tables

Supplementary Table S1 Primers used in QPCR

Genes	Primers	Sequences (5′-3′)
CmMYB2	Forward	AGAAGCCGTTTGTGCCGTTTAG
	Reversed	CCGTTACACATTCCGTTACCA
CmMYB3	Forward	TCATCTAGCACGGTTTCGTATG
	Reversed	TGGCACACTTGTATTTGTACACGT
CmMYB4	Forward	TGGACTATAGAAGCTTGGAGATGA
	Reversed	GCTTGCATACGACTATACGAGTGA
CmMYB5	Forward	GCGTTGCGTCAACATCTAGTG
	Reversed	CAACACACGAACTCCTTCTTC
CmMYB6	Forward	ACGGCGAAATAGGGTGGTCATTAG
	Reversed	GGATTGCAATATCATAGTTGGTCCG
CmMYB74	Forward	ACATTTCCTCGTCACCAACATCT
	Reversed	GAAACTCAAACTGCTTGTCTGTGGT
CmMYB#1	Forward	GAGTCTCCAGACAATTCAGATC
	Reversed	GAACAACCACACCACCAACTG
CmMYB#2	Forward	CTCATACTCGCCAAACTCGTC
	Reversed	GAGTAGACAACCTGTCAAGTAG
CmMYB#3	Forward	CCAGGAATTGGCCACCATTG
	Reversed	CCTGAATGCTTTAGCTAAGTCC
CmMYB#4	Forward	GCGAGGTAGATGACATTGTGG

	Reversed	CTCAGGTAACTCGGGTAGTTCC
CmMYB#5	Forward	CATTGGGAGCAGGGATCCCGAGC
	Reversed	CTCTGGGTGGGTTTTGCTCTC
CmMYB#7	Forward	TACAGGATGCACAAGCTTGTTG
	Reversed	ACATCGTATGAGACAAAGTGTC
CmMYB#8	Forward	TCGTGCTACCGTACTTGCCTG
	Reversed	GCCACAACTCATCCATGTTCC
CmMYB#9	Forward	CAATACATCTCCACCGTACAG
	Reversed	GATGCACTTAAAGACACTTTGG
CmMYB#10	Forward	CATGGATGATGACATGGTTTTGG
	Reversed	GTGGTAATCCATCTCCTCTTGTG
CmMYB#11	Forward	GATCATTCAGGGTCGAAAATGAG
	Reversed	CATATCTGATGGAAGACATCAG
CmMYB#12	Forward	CGTTAGGGCTTCCTGGGATGG
	Reversed	CCTTGATTATCACAATACGATG
CmMYB#13	Forward	CCCACTGACTCTCCGCTACCTCC
	Reversed	GCATTACTAATAGCAACTTCACC
CmMYB#14	Forward	GCTGGGACAAGATGATGAGTGG
	Reversed	GGCCCCGTCGAGTTGGCTTGCGG
CmMYB#15	Forward	GTGATGGTCTATTAGCGGATCC
	Reversed	CATCACCATCAAAATTCACCTTC
CmMYB#16	Forward	GCATGAGCTCAAAATCTTCACAG

	Reversed	AACCTTAATTCCATTGCCAATG
CmMYB#17	Forward	GGATAAGCAGTGGTGACATGGC
	Reversed	CCAAGTGTCTATCTAGCTACATG
CmMYB#18	Forward	CGTTGCAACTTTACTAGAGGTG
	Reversed	CTCTAAAGCATGAGAGAACTAG
CmMYB#19	Forward	CTATGGCACAAGGAATTCCGAGC
	Reversed	TTGCAAGGTGGTGACTGAGAAG
CmMYB#20	Forward	CAATGTGGGTGTTGTGGAGGAGG
	Reversed	CTCCCTAACTTCTCTAGCAATC
CmMYB#21	Forward	GGATGTTTCGCAATCAGTTTCG
	Reversed	CACTTTGTGTTGCAGCCTCATC
CmMYB#22	Forward	GGAGGAAGCAGAAGAGATAACAC
	Reversed	CATATTCCAAATATTCACCATCG
CmMYB#23	Forward	ATGGGGCCTAAACCAGAACCTG
	Reversed	GTAGTGCGGTATCAGATGAGTC
CmMYB#24	Forward	CCAGAAGATGGTGACAGTAGCG
	Reversed	CATCTCCATCTACTCGACAAG
CmMYB#25	Forward	GTGTCGCGAGATGTAGCGACAG
	Reversed	CCTCTTCACCACAGGCACCACC
CmMYB#26	Forward	CGCTTCCTGGAGCGGAGTCGAG
	Reversed	CCTCACTTCCATTCTAATCATC
CmMYB59	Forward	ACTTAGTCTTACTCAAACATAAGTG

	Reversed	AATTTTGCGCTTGTTGTCGGGATA
CmMYB#27	Forward	GAATGAGGATCCCTCGACCTTGG
	Reversed	GAACTTAGATGATGCATATCGAG
CmMYB#28	Forward	CTCTTAGGCGACAATGATCCTCC
	Reversed	TGTAGCACATTCATCCCATGTCG
CmMYB#29	Forward	GGAATAAGTATCTCCAATCACCG
	Reversed	GTATCCACACCTTCATGATTCCC
CmMYB#30	Forward	CTCCTCTCGAACCCAATGGAGTC
	Reversed	TTCTTACAACACACTTGCAAGCG
CmMYB#31	Forward	GCAAACTTCTTCGGGGCATACTG
	Reversed	CTGCATGGACCATAAGTCTTCC
CmMYB#32	Forward	TCAGGGCAGAACAATCAAGTG
	Reversed	ACTCATTATGTAGTAACTGCA
CmMYB#33	Forward	ACGATGGTGACAGTAGCGGCCG
	Reversed	CTATCATCTCCATCTACTCGAC
CmMYB#34	Forward	GAGTCTAAAGGGCATGTGCAG
	Reversed	GAAGTGGACACAGTCATACAG
CmMYB#35	Forward	CAGGAAGCCATGGAGGTGAGG
	Reversed	GCAACACCTTTACGGCGCTCC
CmMYB#36	Forward	GCTGCTGAGGTACCTGGGGAG
	Reversed	GTCCCACCCTCACCAGCATGG
CmMYB#37	Forward	CCAATAGTATGTGTTCAAAGG

	Reversed	GCAGCCACATTTGTCCAGCGG
CmMYB#38	Forward	CGCCCTTGTTAACTAACGCCG
	Reversed	CCTCCGTCCACGGCACCCCTC
CmMYB#39	Forward	GCGGATGTTGTTGTGTCTGCG
	Reversed	CTCAGTCCATGGAACTCCTCG
CmMYB#40	Forward	TCGAACCAGGAAAATGGTCTG
	Reversed	CTCCACTTCCGCTTCCACCTC
CmMYB#41	Forward	CTCGATGCTACGGGATATGCG
	Reversed	CTCCAGTCTCCTTTCCCTACG
CmMYB#42	Forward	GCATGACACCACAAGAGGCGG
	Reversed	GCGGTTCTCCCTTTGAGAGTC
CmMYB#43	Forward	GCGGCAGTTGCAGCTGCATAC
	Reversed	CCACATCCACATCATTGCACC
CmMYB#44	Forward	CTCCGTGCTTATGTCCACCAG
	Reversed	GTTCTTGTGGGGTTAAGGAGCC
CmMYB#45	Forward	GCATCGGTACAAGATTGGACC
	Reversed	CATCTTCTCCAACTCTGCATCG
CmMYB#46	Forward	GAAGGGGAGAGCCTGTACCGC
	Reversed	TTCGCTCTGATGCTTCCCGAC
CmMYB#47	Forward	CTGCTGACCATCTATCCTCTC
	Reversed	CATGTTGTAGTACAATATCGG
CmMYB#48	Forward	TGGTGAGATCACCTTGTTGTG

	Reversed	CACACCTATTCAAGCCAGCAG
CmMYB#49	Forward	GAAGGGCATTACTCGATGGAC
	Reversed	CTTGACTACCCATTGTCCATG
CmMYB#50	Forward	GCCTCATATCCCGGTCACGTC
	Reversed	CATCATTCTCTGCTCCGTACG
CmMYB#51	Forward	GGTGCATGGAGTGAAGATGAAG
	Reversed	GCCACATCTAGCCAACCCAGC
CmMYB#52	Forward	AGACCAACTGGCTGACATGTC
	Reversed	CACCAGAGGAAGGCTGCCCTC
CmMYB#53	Forward	CATTGCTTGGCTTAGAAGCGG
	Reversed	CCTGACAGGCATGGACAGCAC
CmMYB#54	Forward	CTCGTTTACCTGGAAGAACCG
	Reversed	ACATGTTGGAGTGAGACGAGC
CmMYB#55	Forward	TAGACTCTGAAGTCCATTCGG
	Reversed	CATCTTCAGCAGAACACTTCC
CmMYB#56	Forward	CTTCGGTTAACCCCTAAACAGC
	Reversed	TCGGAGTATTAGCATCGCAGC
CmMYB#57	Forward	GTGCGAGTCCCAATAAGGGAG
	Reversed	ACCAGCAACCTACCTACAGCC
CmMYB#58	Forward	ACGCAGACCGTAACAGAGATC
	Reversed	CGGTTTGCTGACCCTCTGCAG
CmMYB#59	Forward	AAGGCGGATGGTCACAGGAGG

	Reversed	CAGCATTGTCCGTCCTGCCTG
CmMYB#60	Forward	GCCGGGAGAGGTGGCACAACC
	Reversed	CTATCTCTGCCCATTTGTTGCC
CmMYB#61	Forward	CCAGGGGAATTCTCTGAAGCTG
	Reversed	GGAGCTGACGACTGTGGGAGC
CmMYB#62	Forward	AGGTCGCGAGTAGGGTCACGG
	Reversed	GCCCTCTATATCCCATTCTCC
CmMYB#63	Forward	TCTACCAAGTACATGTACTCC
	Reversed	GTCCATCTCCCCCTCTTGAGC
CmMYB#64	Forward	CTGTATGTCAAGAGGCCAGTG
	Reversed	CAGTGCTAGAAGGGTAAATAGG
CmMYB#65	Forward	GTCACCACCTTGCAAAAGGGCC
	Reversed	CTAGGGGAATATCAAATACCCG
CmMYB#66	Forward	AGCTCTCTTCCTAGCTCACAC
	Reversed	CATCCTTTCACAACATGGAGC
CmMYB#67	Forward	GGATGGTAGAACTCAGCTATG
	Reversed	CTCTTGCGCAGACCACTGTCC
CmMYB#68	Forward	CTCCACGTCTCGATCTCTCAC
	Reversed	CGGCTAAGAGAGTAACAAGGC
CmMYB#69	Forward	GATGAACGGGTACGAGACCGC
	Reversed	GAGTCTCATGAAACGATGTGG
CmMYB#70	Forward	CTCCCAGATCCAACACCTCGC

	Reversed	CTCAGCTCATGCTATCCATGG
CmMYB#71	Forward	GCTTATGGGTCCAACTTGAGC
	Reversed	ATGTCAAAAGGGGCATTGGAC
CmMYB#72	Forward	TCGTGGGACGATTGTGCTACG
	Reversed	TCTAGTGTGTCTAAGATGCTC
CmMYB#73	Forward	GAAAGGGGCTGTAGTCACCTG
	Reversed	TGCACCACGCTTGAGATCAGG
CmMYB#74	Forward	TTCCACCTTAAGTCCCTATCC
	Reversed	TCTAGCCAAGGCCCTCTACGC
CmMYB#75	Forward	GATGCACAAGTACCAGTCATG
	Reversed	CCCGCTGCATCTTCTTATTCC
CmMYB#76	Forward	GATTACCCGTTTCATGCATTCC
	Reversed	AGTAACCGCCACCCGTCTACC
CmMYB#77	Forward	TGCTGTCAACTTATGAGGTTG
	Reversed	GCCTAGCTGCAGGGTCTCACG
CmMYB#78	Forward	CACTTCTCTCCAACTTGAGCC
	Reversed	TGCGCTCAGATGAATTAAGCC
CmMYB#79	Forward	GCTGCTCACTTGCCAAGGAGG
	Reversed	GGTACCCAAGAGTTGGGTGCC
CmMYB#80	Forward	ATGGGGAGAAGAAGAACGGTG
	Reversed	TTCAAACACATCTAGTCACTC
CmMYB#81	Forward	AGTTGCAGATTGAGATGGACG

	Reversed	CCATCTATTGCCAAGCTGAGC
CmMYB#82	Forward	AGATCTAGGCTTAGAAGCTCG
	Reversed	GTGAATCTACTCTGTCCTCGC
CmMYB#83	Forward	GTGGCAACTGGATTGCTCTCC
	Reversed	TGACTCTATCTTCATCATCAG
CmMYB#84	Forward	GGTCAAGCACTCTCTATTGGTG
	Reversed	GCAAGTTCACAACGAACCAACC
CmMYB#85	Forward	GGAAGTACTATGAATGGTCCGG
	Reversed	CACTTGTTGGCCGTCTTCGATC
CmCHS	Forward	CAAGGAGGAGAAGATGAGAG
	Reversed	CCGAACCCGAATAAAACAC
CmCHI	Forward	GCAGGTGTGAGAGGTATG
	Reversed	GCAACGGAATCGCTTTATC
CmF3H	Forward	CACGGGTAATGTTAGGTAGG
	Reversed	TGTAGGTCAAATCGGTCAAG
CmF3'H	Forward	AGGCGGATTCATCGTTTC
	Reversed	ACTCTTTGGGCTTATCAGG
CmDFR	Forward	TAGTAACAAAGGCGGACAC
	Reversed	GGATTATTCACCAAGTATGCTC
CmANS	Forward	GGGCTCCAACTACTCTATG
	Reversed	TCCTAACCTTCTCCTTATTCAC
CmUFGT	Forward	ATCACAGGGACTATCAACC

Reversed TCCACCACCAGACAACTA

Supplementary Table S2 Primers used in cloning genes into SK, NLuc, CLuc and LUC vectors

Genes	Vectors	Primers	Sequences (5’-3’)
CmDFR	LUC	Forward	GGGGATCCGATGTGATTTTGGTGTTGACTTG
	LUC	Reversed	TTCCATGGGTTGTTTAATCTTGTGGTTTTG
CmUFGT	LUC	Forward	GGGGATCCATTAAATATACTTAGGTTAATTT
	LUC	Reversed	TTCCATGGTTGGCTGTATTTTAAGAAAATG
CmMYB6	SK	Forward	TGGCGGCCGCATGGGGGAGTACAGAAAAATGAGAC
	SK	Reversed	CCACTAGTGGATTGCAATATCATAGTTGGTCCG
CmMYB#7	SK	Forward	AGAACTAGTGGATCCATGATGGATAAACGTTCAAGGAAG
	SK	Reversed	GGTATCGATAAGCTTTTAAGATTTGGTTCTTGTCCTC
CmMYB#7-m	SK	Forward	AGAACTAGTGGATCCATGATGGATAAACGTTCAAGGAAG
	SK	Reversed	GGTATCGATAAGCTTTTAAGATTTGGTTCTTGTCCTC
CmMYB#15	SK	Forward	AGAACTAGTGGATCCATGGGAAGAGCTCCTTGCTGTG

	SK	Reversed	GGTATCGATAAGCTTTCAAAATTCACCTTCAAACCCT
CmMYB#16	SK	Forward	AGAACTAGTGGATCCATGGGAAGAACACCGTGTTGTG
	SK	Reversed	GGTATCGATAAGCTTTTAATTCCATTGCCAATGAAAC
CmMYB#17	SK	Forward	AGAACTAGTGGATCCATGAGAACTACCAGTAAGATGGC
	SK	Reversed	GGTATCGATAAGCTTTTACTTCCTGAATTGCCACAATTC
CmMYB#85	SK	Forward	AGAACTAGTGGATCCATGGGAAGAGCACCTTGTTGCTC
	SK	Reversed	GGTATCGATAAGCTTTTACACTTGTTGGCCGTCTTCG
CmbHLH2	SK	Forward	CCGTCGACATGGCTGCCAGCGGACCACCTCG
	SK	Reversed	CCGGGCCCCTAAGGAGATATTATTTGGTTGAT
CmMYB6	NLuc	Forward	GCTCGGTACCATGGGGGAGTACAGAAAAATGAGAC
	NLuc	Reversed	TGGTCGACTAGTTGGTCCGAATTTAAAAAGTC
CmbHLH2	CLuc	Forward	GCGGTACCATGGCTGCCAGCGGACCACCTCG
	CLuc	Reversed	AGGTCGACCTAAGGAGATATTATTT

			GGTTGAT
CmMYB#7	AD	Forward	GAGGCCAGTGAATTCATGATGGATA AACGTTCAAGGA
	AD	Reversed	GAGCTCGATGGATCCTTAAGATTTG GTTCTTGTCCTCAAG
CmMYB#7-m	AD	Forward	GAGGCCAGTGAATTCATGATGGATA AACGTTCAAGGA
	AD	Reversed	GAGCTCGATGGATCCTTAAGATTTG GTTCTTGTCCTCAAG
CmMYB#7	BD	Forward	ATGGAGGCCGAATTCATGATGGATA AACGTTCAAGGA
	BD	Reversed	CAGGTCGACGGATCCTTAAGATTTG GTTCTTGTCCTCAAG
CmMYB#7-m	BD	Forward	ATGGAGGCCGAATTCATGATGGATA AACGTTCAAGGA
	BD	Reversed	CAGGTCGACGGATCCTTAAGATTTG GTTCTTGTCCTCAAG
CmbHLH2	AD	Forward	GAGGCCAGTGAATTCATGGCTGCC AGCGGACCACCTCG
	AD	Reversed	GAGCTCGATGGATCCCTAAGGAGAT ATTATTTGGTTGAT
CmbHLH2	BD	Forward	ATGGAGGCCGAATTCATGGCTGCC AGCGGACCACCTCG
	BD	Reversed	CAGGTCGACGGATCCCTAAGGAGA TATTATTTGGTTGAT

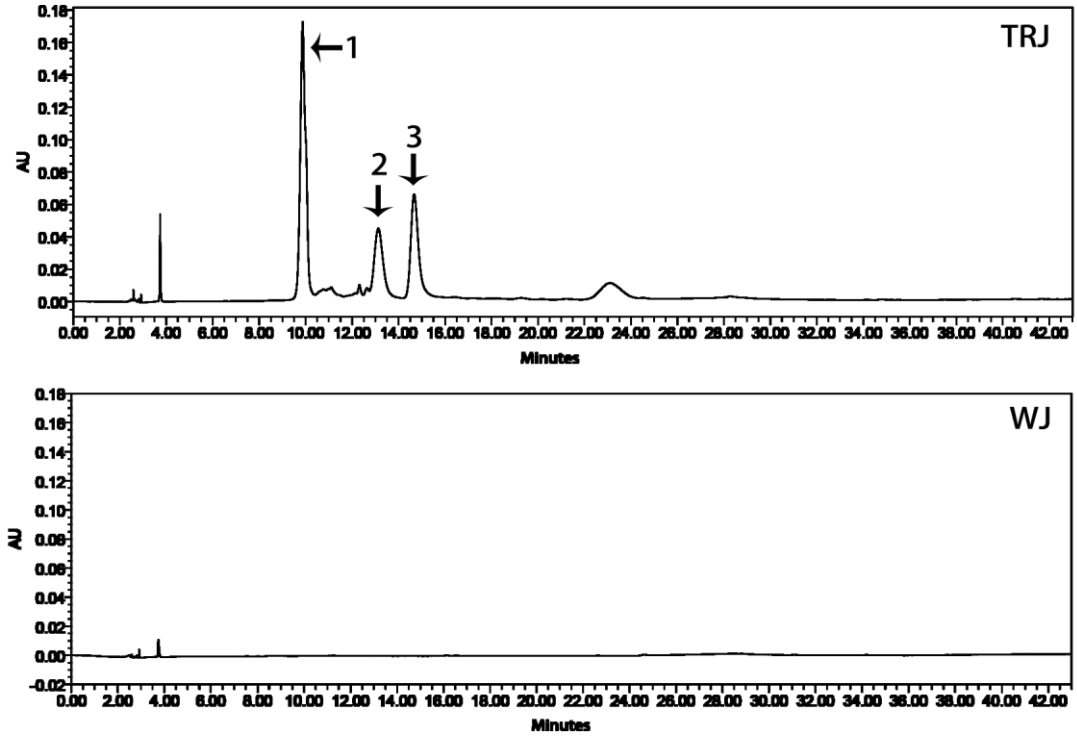

Fig. S1. HPLC analysis of extracts of ‘Turning red Jimba’ (TRJ) and white ‘Jimba’ (WJ) ‘Jimba’ petals. Y-axis indicates the absorbance at 530 nm. Three peaks were detected: cyanidin-3-glucoside (1), cyanidin-3-O-(6-O-acetyl-β-D-glucoside) (2), cyanidin 3-O-(6"-O-succinyl-β-glucopyranoside) (3).

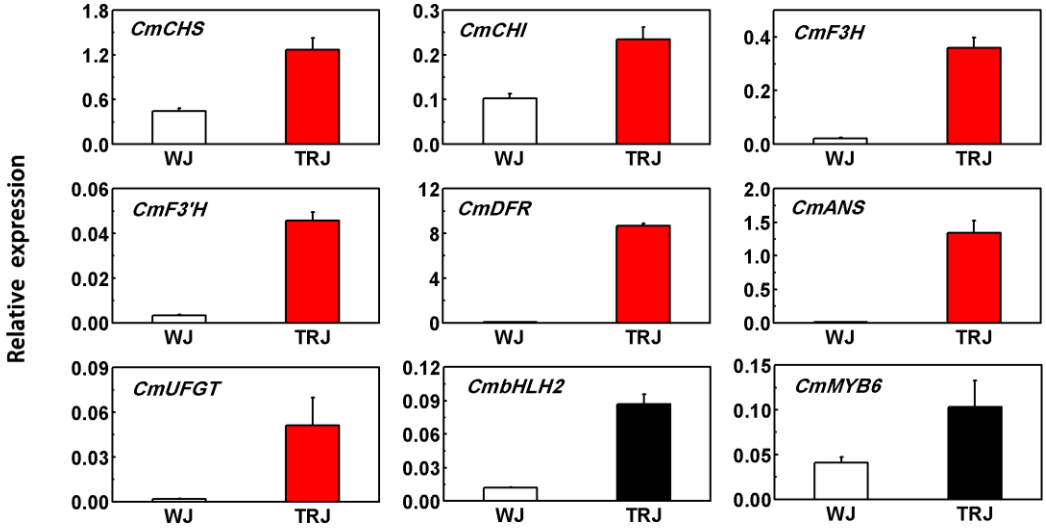

Fig. S2. The expression patterns of anthocyanin biosynthetic genes and two reported transcription factors were studied in white ‘Jimba’ (WJ) and ‘Turning red Jimba’ (TRJ). Error bars are the S.E. of three independent experiments.

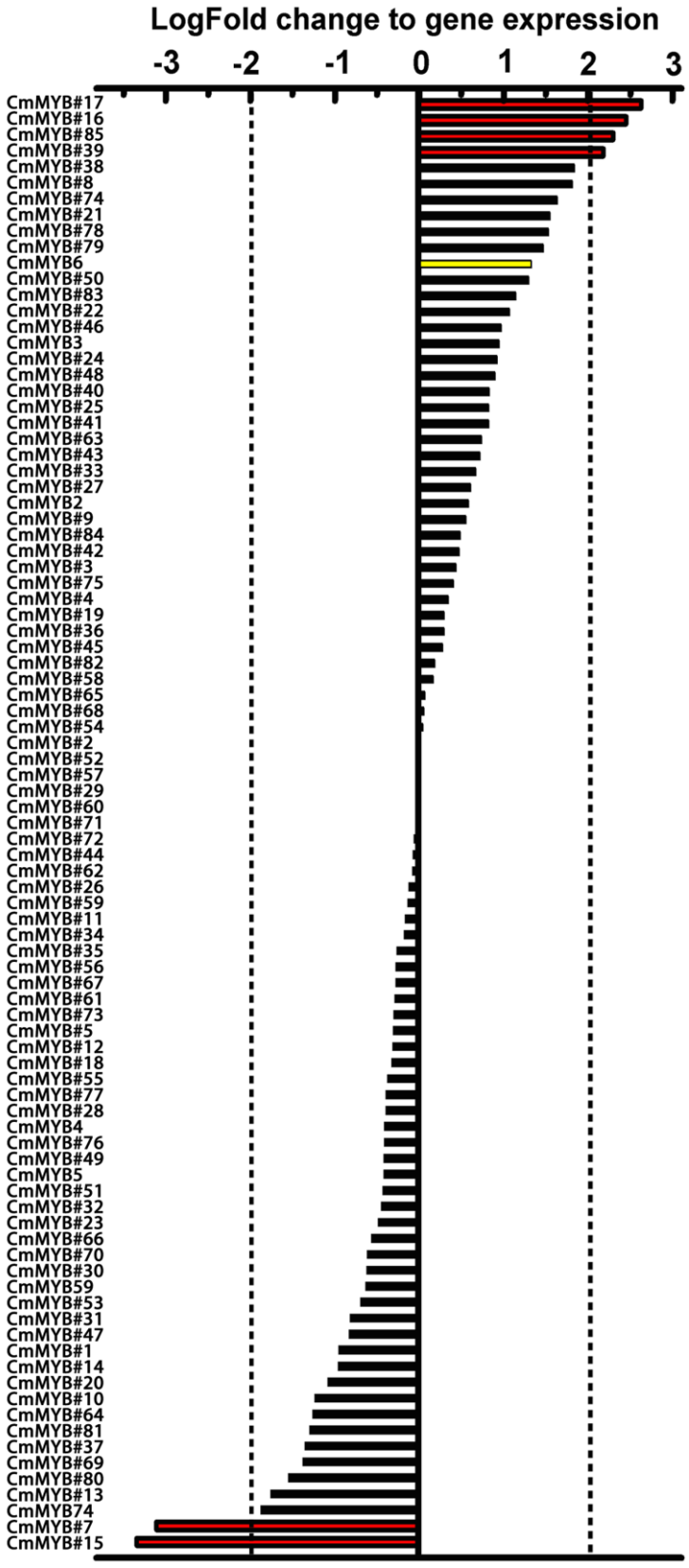

Fig. S3. Log Fold change expression of 91 MYBs in flower petals of white 'Jimba' (WJ) and 'Turning red Jimba' (TRJ). Log Fold changes above 2 were marked with red bars. The anthocyanin regulator *CmMYB6* was marked with yellow bar.

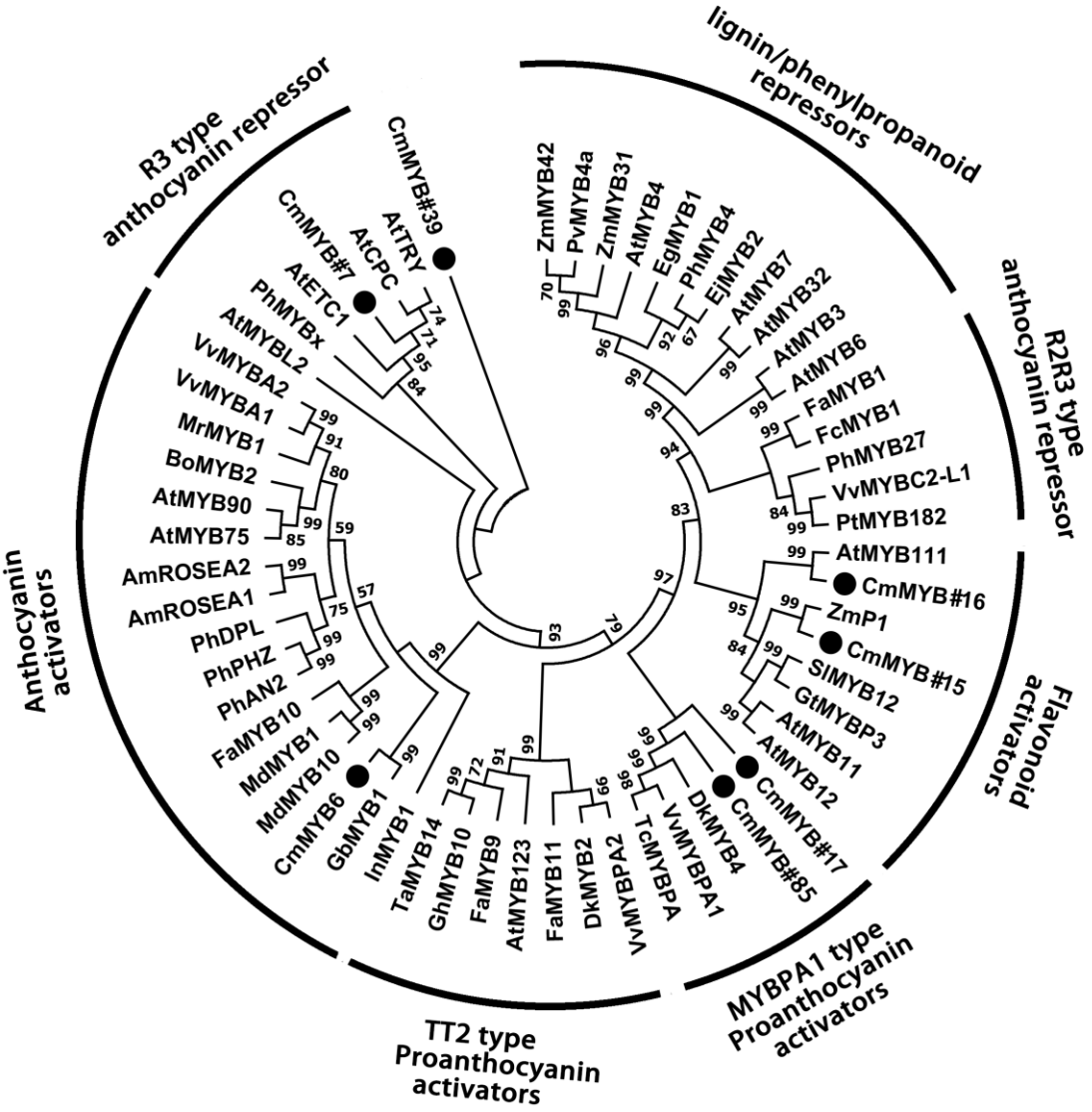

Fig. S4. Phylogenetic analysis of 7 CmMYBs and reported MYBs related to phenylpropanoid pathway in other plant species. Neighbor-joining Tree was constructed using MEGA7. MYBs from chrysanthemum were marked with black solid circle.

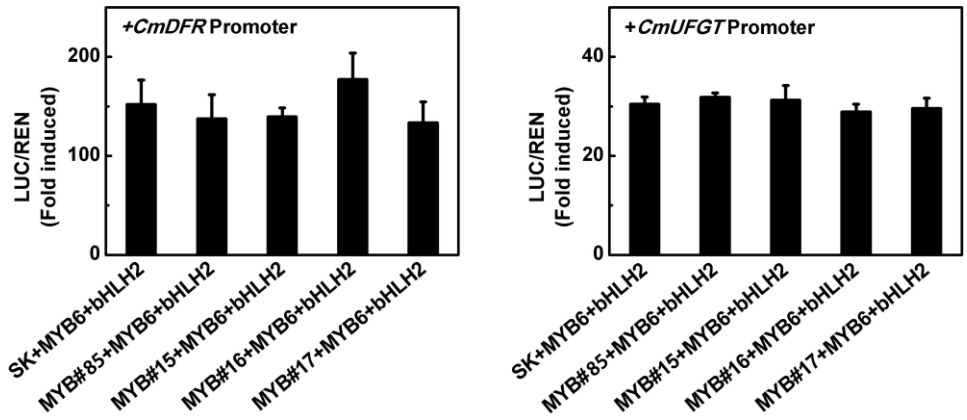

Fig. S5 Regulatory effects of transiently over expressing *CmMYB#85*, *CmMYB#15*, *CmMYB#16*, *CmMYB#17* with *CmMYB6* or *CmbHLH2* on transcription from *CmDFR* and *CmUFGT* promoters. SK refers to 'Empty vector'. Error bars are the S.E. of three independent experiments.

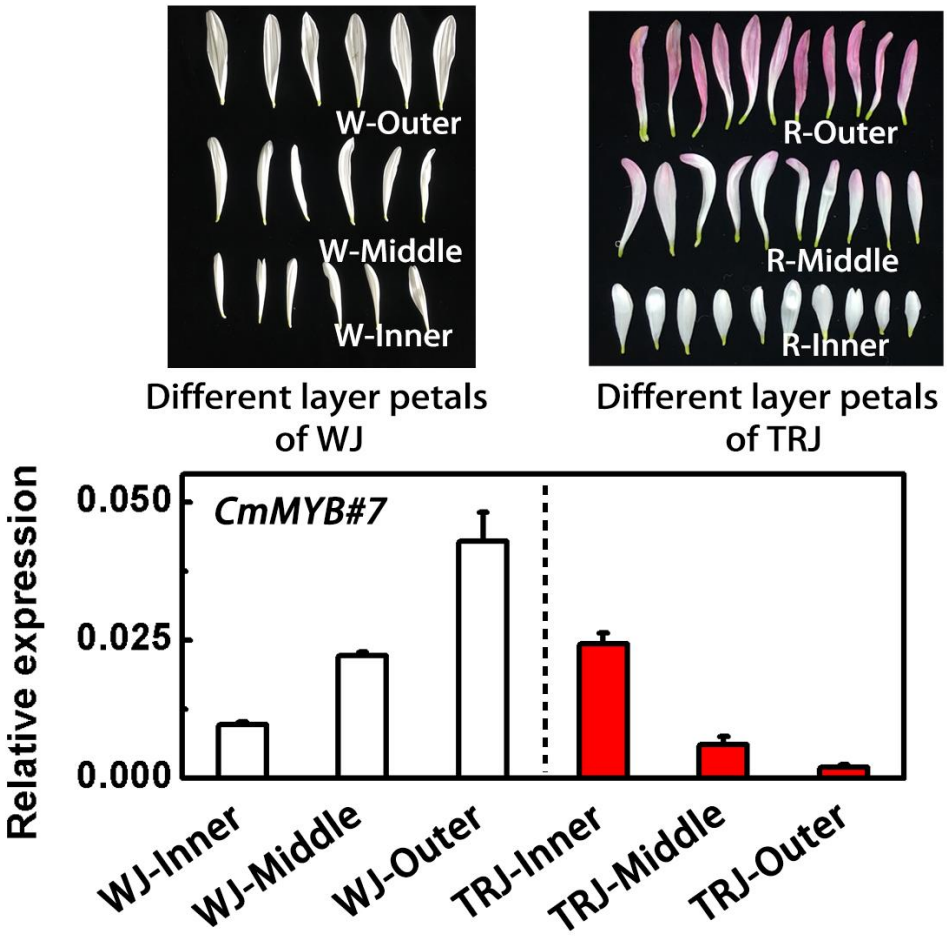

Fig. S6 The expression patterns of *CmMYB#7* in different type petals of white ‘Jimba’ and ‘Turning red Jimba’ were measured by real-time PCR. Error bars are the S.E. of three independent experiments.

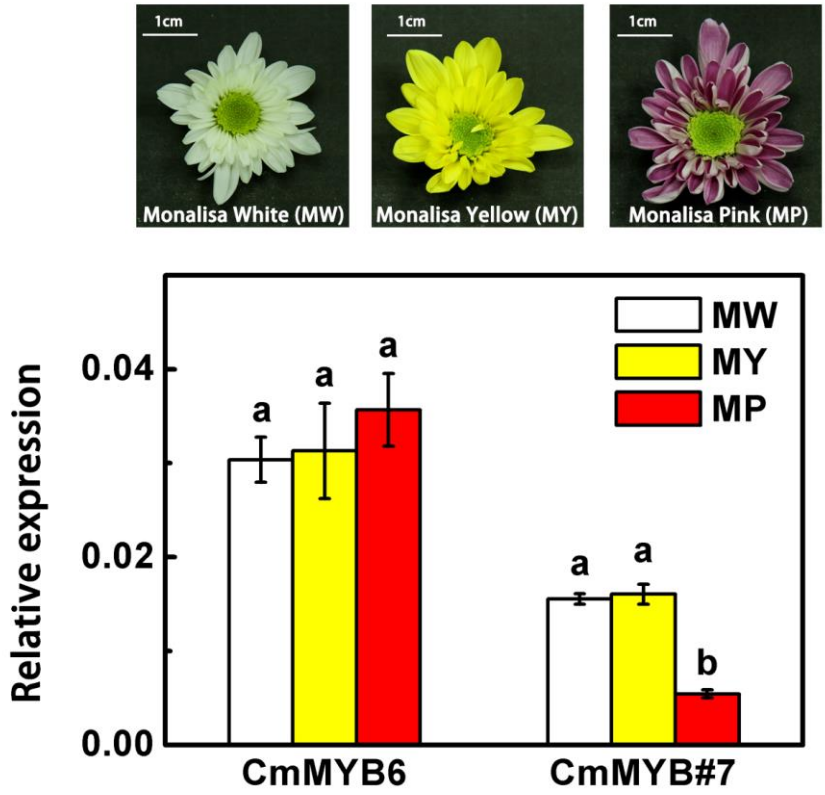

Fig. S7 The expression patterns of *CmMYB6* and *CmMYB#7* in three cultivars with different floral colors. Error bars are the S.E. of three independent experiments.