NtMYB3, an R2R3-MYB from Narcissus, Regulates Flavonoid Biosynthesis

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Supplementary Material

Supplemental Table 1. Analysis of putative cis-acting elements in *NtFLS* promoter.

Motif	Function	Stand	Position[a]	Position(5′ - 3′)
5′ UTR Py-rich stretch stretch	*cis*-acting element conferring high transcription levels	+	−552	TTTCTCTC TCTCTC
TATA-box	core promoter element around -30 of transcription start	+	−831、−884、−895、−908、900	TATA
			−883、−909	ATATAT
			−908	TATATA
		−	−63	TATA
			−63	TATAA
			−908	TATATAA
CAAT-box	common cis-acting element in promoter and enhancer regions	+	−446	CCAAT
			−627、−832、−466	CAAT
			−515	CAAAT
		−	−910、−860、−619、−650、−331	CAAT
				CAAAT
3-AF1 binding site	Light responsive element	−	−421	TAAGAGA GGAA
Box II	part of a light responsive element	+	−213	CCACGTGG C
G-Box	cis-acting regulatory element involved in light responsiveness	−	−215	CACGTG
G-box	cis-acting regulatory element involved in light responsiveness	+	−81	CACGTG
TCT-motif	part of a light responsive element	+	−402	TCTTAC
ACE	cis-acting element involved in light responsiveness	−	−107	ACTACGTT GG
Box I	Light responsive element	+	−199	TTTCAAA
Myb-binding site	MYB combination element	+	−682	CAACAG
MYB	MYB combination element	+	−682	CAACAG

ABRE	cis-acting elemen involved in the abscisic acid responsiveness	+	−215	ACGTG
		−	−106、−82	ACGTG
ABRE2		−	−214	CCACGTGG
ABRE3a		−	105	TACGTG
ABRE4		+	105	CACGTA
		−	−140	CAACCA
P-box	Gibberellin response element	−	−354	GACCAAA CTCGT
O2-site	cis-acting regulatory element involved in zen metabolism regulation	−	−532	GATGATAT GC
TC-rich repeats	cis-acting element involved in defense and stress responsiveness	+	−497	ATTCTCTA AC
		+	−407	GTTTTCTT AC
CAT-box	cis-acting regulatory element related to meristem expression	+	−313	GCCACT
Skn-1_motif	*cis*-acting regulatory element required for endosperm expression	−	−825	GTCAT

Supplemental Table 2. List of primers used in this studies.

Name	Forward primer (5' to 3')	Reverse primer (5' to 3')	Note
MYB3	AATATGGGTAGGTCTCCTTGTT GTG	GATTACAGGACACGCAAAGTAAATCTA	Cloning of full length of ORF
pSAK-*MYB3*	TGGATCCAAAGAATTCAATAT GGGTAGGTCTCCTTGTTGTG	TACTCTCGAGAAGCTTGATTACAGGAC ACGCAAAGTAAATCTA	Vector construction
QRT *NtCHS*		AAATTGCCTCTCTTGAGATCGG ACCTATAATGACCGCGGCTG	
NtCHI	TGGGTAGGTCTCCTTGTT	CAACGTTGACAACATCAGGC	
NtF3H	ACTCCGGATGGCTAAGGACTG TG	CCTTGGTTAAGGCCTCCTTC	
NtFLS	GAAATCCTCCGATCCAGTGA ACAGGGTGAAGTGGTCCAAG	TCCCTGTAGGAGGGAGGATT	
NtLAR	GAACTTGAAGGGAAAAGGGG TCAAGGTCCTTTACGCCATC	ACGAACCTGCTTCTCTTTGG	qRT-PCR analysis
NtANR	CATTTGACTTTCCCAAACGC GGGAATGAAGCTCACTACAGC	ATTGGGCTTTTGAGTTGTGC	
NtDFR	GAGTGCATTGGATGCCTTTT TGGCGTTGAAGCTCATACTG	ACTCCGGCCATTTCTCTTGG	
NtUFGT	AATGGAACTGGAATGGTCAAG GC	CCAGCTCCATTAGGTCCTTG	
NtANS		GGAATTAGGCACACACTTTGC	
NtACT		TGCCAGATCTTCTCCATGTCATCCCA	