

**Table S5** List of cis-acting elements in BnATGs promoters, cell cycle and tissue-specific, hormone-responsive, light

		BnATG101a	BnATG101b	BnATG101c	BnATG101d	BnATG101e	BnATG10a
Cell cycle and tissue specific	AC-I	specific expression					
	AC-II	specific expression					
	CAT-box	element related to meristem	1				1
	CGTCC motif	cell proliferation response					
	CCGTCC-box	development responsive elements					
	circadian	element involved in circadian control					
	dOCT	meristem specific activation					
	E2Fb	cell proliferation response					
	F-box	cell cycle regulation					
	GCN4_motif	involved in endosperm expression					
	HD-Zip 1	initiation of the palisade mesophyll cells					
	MBSI	involved in flavonoid biosynthetic	1				
	MSA-like	involved in cell cycle regulation					
	myb-binding site	cell proliferation response		3	2		2
	NON	cell proliferation response					
	O2-site	site involved in zein metabolism regulation				1	1
	OCT	cell proliferation response					
	re2f-1	cell proliferation response					
	RY-element	element involved in seed-specific regulation					
Hormone responsive element	ABRE	element involved in the abscisic acid responsiveness			1		
	ABRE3a	element involved in the abscisic acid responsiveness		1		3	
	ABRE4	element involved in the abscisic acid responsiveness		1		3	
	AT~ABRE	ABA response					
	AuxRE	auxin-responsive element					
	AuxRR-core	element involved in auxin responsiveness					1
	CARE	response, GA response					
	ERE	ethylene-responsive	1	1		1	
	GARE-motif	auxin-responsive element			1		
	P-box	auxin-responsive element					1
	TATC-box	involved in gibberellin-responsiveness		1			
	TCA	involved in salicylic acid responsiveness					
	TGA-element	involved in salicylic acid responsiveness		1	1		2
	TGA-box	auxin-responsive element					
	TGA-element	ethylene responsive element	2	1	1		
Light responsive	AF1 binding	ethylene responsive element					
	4cl-CMA1b	ethylene responsive element					
	AAAC-motif	ethylene responsive element					
	ACE	element involved in light responsiveness				1	
	AE-box	module for light response		1	1		
	AT1-motif	light responsive module					
	ATC-motif	module involved in light responsiveness					
	ATCT-motif	module involved in light responsiveness					
	Box 4	module involved in light response	1		1	1	
	Box II	light responsive element		1			
	CAG-motif	light response element					
	chs-CMA1a	light responsive element					
	chs-CMA2a	light responsive element					
	chs-Unit 1	light responsive element					

Light responsive	GA-motif	light responsive element					
	Gap-box	light responsive	1				
	GATA-motif	light responsive element	1		1		1
	GATT-motif	light responsive element					
	G-box	element involved in light responsiveness		1	6	6	
	GT1-motif	responsive el	4	1	1	2	
	GTGGC-motif	light responsive element					1
	I-box	light responsive element				1	
	AMP-element	light responsive element			1		
	L-box	light responsive element					
	MRE	involved in light responsiveness			1		1
	Sp1	responsive element					
	TCCC-motif	light responsive element		1			
	TCT-motif	light responsive	5	2	1	1	
Regulatory element	AF3 binding	d DNA module array (CMA3)					
	A-box	g regulatory element					
	T-rich element	h DNA binding protein (ATBP-1)					
	II-like sequence	g regulatory element					
	Box III	tein binding site					
	HD-Zip 3	tein binding site					
Stress responsive element	G-TATA-reg	g regulatory element					
	CATCCT sequence	ought response					
	AP-1	Cd response					
	ARE	nt essential	1	2	3	2	2
	T-rich sequence	icator-mediated activation (2copies)					
	box S	and pathogen response					
	DRE core	ought response	1				
	DRE1	ought response				1	
	GC-motif	involved in anoxic specific inducibility					
	LTR	ed in low-temperature responsiveness			1	2	1
	MBS	involved in d	3	1	2		1
	MYB	onse, drought	3	3	3	2	3
	Myb	onse, drought	3	1	2	1	2
	B recognition	ought response					1
	B-like sequence	responsive element	1			2	
	MYC	ought respor	4		2	2	6
	Myc	ought respor	1			1	
	C-rich repeat	ad in defense	1	1	1	1	
	W box	esponsive cis-element					
	WRE3	wounding	1			1	
	WUN-motif	responsive element					
Unknown function	AGAA-motif			3			
	CCAAT-box						1
	CTAG-motif						

-responsive, regulatory, stress-responsive, and unknown function elements are shown in red, yellow, blue, brown,

BnATG10b	BnATG11a	BnATG11b	BnATG11c	BnATG11d	BnATG11e	BnATG11f	BnATG12a	BnATG12b
							1	
1								
					1			
		1			1			
				1				
1		1						1
1		1		1		1		2
1								
					2			
					1		1	
					1		1	
	1	2				1		
		1	2		1		2	4
2	1	3		2		3		
			1					
		2	1	1		2		
	2			1	1		1	1
1								
		1		1			2	
		1	1			1		
				1				
							2	
	1	1				3		
	4	6	5	2	3	2		2
						1	2	1

							1	
					1			
					2			1
	4	3		2	5	3	3	3
			1					
1								
1	1	1		1		1	1	
			1				1	
1				2	1			
	1	1	1	1		1		
	1		1		1		1	
		1				1		
1	6	4		1	3	4		1
			1					
						1		
				1				
1		1						
1		1			1		1	
2	2	1		2	1	1	1	5
1	1	1			1		1	
1								
								3
5	2	2	3	1	4	1	4	3
							1	
	1	1		1	1			
	1	1		2	2	1		2
1	2	2						1
	2	1	1			2	1	
	2			1				1
1								

green, and gray colors, respectively,

BnATG12c	BnATG13a	BnATG13b	BnATG13c	BnATG13d	BnATG14a	BnATG14b	BnATG14c	BnATG14d
1								
	1	1	1					
					2			
					2			
						1		
	1							
				1				
			1		3		2	2
1	2	1	1	1				
	1							
					2		2	2
					2		2	2
1								
1	1		1		3		2	2
	1				1			
2		1		1				
	1	1	1	1				
1		1		2		2		
1	1	2		1		1		
					1		2	2
	1							
	1							
1						1		
2		3	2	1	2	1		
		1						
	1		1				3	3

		1						
1		1			2			
					1			
1		2		3	3		2	2
2				1				
1					2			
1								
1			3	1				
				1				
1				1				
1	1		1	1	4		2	2
					2			
1								
	1							
	4	4	4	3		1		
		1						
				1	1			
2	1	1	1					
1	1		1			1		
2	1		1	1	5	3	5	5
1	1		1	1		2		
					1	2		
				1	2	2	3	3
		3	1	1	2	2	2	2
1				1		1		
		1					2	2
1								
		2		1	2		4	4
						1		
1	1	2	2		1	3	2	2
					1	2		

BnATG14e	BnATG16a	BnATG16b	BnATG18a	BnATG18b	BnATG18c	BnATG18d	BnATG18e	BnATG18f
1					1	1	1	
	1					1		
	1					1		
					1		2	
				1				
					3		1	
2				1		3	1	
1						1		
		1					1	1
		1						
		1						
								1
						1		
	3			2				
1				1		1		
		2					1	
	1	1					1	
	2	1			3			
			2			1		2
1					1	2	1	1
			1					
						1		
		1			1			
			1					1
	3		3	2				
				1				

							1	1
		1						
							1	
		5	4	3		2	6	3
			3	3		1		
		1		1			2	
	1			1			1	
1								
1	1							
1	1			1	1		2	
	1					1		
				1	1		1	
							1	
1	4	3	4	4	2	1	2	6
1							2	
1		1				1		
			1					
		1					1	
1			1			1		
						1	1	
4	2		1	2	4	5	1	
	1	1			3	1	1	2
1							2	1
1			1		4			
1		2	2	1	7	3	3	
		1		2				
							1	
						1	3	
1						1		
1	1							
2	1		4	2	3		2	1
1							2	1



BnATG18g	BnATG18h	BnATG18i	BnATG18j	BnATG18k	BnATG18l	BnATG18m	BnATG18n	BnATG18o
	1							
1	1		1			2	1	1
							1	1
							1	1
					1			
	1			1				
	1	1						1
							1	
		1	1	3	1	1	3	
1							1	
3	3					1		
1								1
1								1
1								
			1					1
							1	
		1	3					2
			1	1				
1	2		1		1	2	1	
	1		1					1
			1		1	1	1	
1	1		1			1		
1				2			2	1
						1		
							1	
							1	
	1	2	5	3				1
1								

1								
	1		1		1	1	1	1
4	7	2		4	1	2	3	5
				1	3			2
1	3		1					1
								1
				2				
			1					
1		1		1				
1		2						2
							1	1
1								
								1
1								
3				5	2		1	2
				1				
		1			1	2		1
		1			1	1	1	
						1		
				1			1	
	3	3	1		3	2	1	1
1	2	2	2	8	7	2	5	1
1	3	4	1	1	3	2	1	2
						1		
1	1	1	1	3	5	1		1
4	1	2	4	1	2	2	3	2
1		1	1	1				
				1				1
1	4				1		1	1
	1	1	1			1	1	3
			1					
2	3		3				1	3
						1		

BnATG18p	BnATG18q	BnATG18r	BnATG18s	BnATG18t	BnATG18u	BnATG18v	BnATG18w	BnATG18x
	2		1	1				2
	1		1				1	
	1		1				1	
					1			
	1							
								1
	1			1				
					1			
1		2						
	1		2		1		1	
	2		1	1				
3			1					2
1								
1								
1								
						1		
		1						
	1		1				1	
		2				1		1
		2				3		1
		2	1			1		
1	1	1					1	1
1		1	1		1			
								1
1							2	
	1							

	1						1	
			1		1	1		2
8		1	1	1	1		1	6
1		2		1		1		1
	2							3
							2	
				1				
	1	2	1	2	2			
					1			
	1		1				1	
6	3	3		2		2	7	
				1	1			
	1			1				
		1						1
3		4				1		
1	2			2	1			2
1	1		7	1	1		1	2
4	2	2	3	3	2		1	2
1			4	1				1
1	2		3	1	1	4	2	2
				1	1	3	1	
		1						
		1	1		1		1	1
	1			2	1			1
								1
1	1		1	2		3	1	3

BnATG1a	BnATG1b	BnATG1c	BnATG1d	BnATG1e	BnATG1f	BnATG1g	BnATG1h	BnATG1i
	1							
					1			
			1	1				2
		1						
							1	
						1		
						1		
1			1				2	
								1
	1	1		2				7
1	1			1		1		
1	1			1		1		
		1						
		6		4	4			
1		1			1			
1	1		2			1	1	
		1		2	1	1	1	
	1		1	1	1	1		
1	1	1	1		1		1	1
							1	
4	1	6		1	2	2	1	3
							1	
			1					1

1							2	2
3	3		2	2		1		1
1	1	3	4	2			1	2
1					1			
			1					
						1		
	1						2	
1						1		3
						1		
							1	
				1				
1	1	2	2	3	1	2	3	2
	1				1	1		
						1		
			1			2		
	3	1		1	3	1		
1				1			1	
4	1	1	5	1	1	1	5	
1	1			1			2	1
	1							
	1	1	3	1		1	2	
4	4	4	1	2		4	5	
1		1	1	1				
		1	2	3				
2				1	1		2	
2		2			1			1
	1	1	2	3		1	3	
	1							
							1	

BnATG1j	BnATG1k	BnATG20a	BnATG20b	BnATG3a	BnATG3b	BnATG3c	BnATG3d	BnATG4a
				1				
		1	1					1
					1	1		
					1	1		
			1					
	1				1			
							1	1
						1		
		1						
	2	2	2					4
	1			1		1	1	
	1			1		1	1	
			1					
	1	2	4	3	1	6	3	2
			1					
				1	1	2		
	1							
		2	1		1			
						1		
	1							
1	1	1			1	1		
	1	1						
	5	5	5		3	2		5
					1	1		

		1						
					1			
	1	3	3	2	1	1	4	6
	3		2	1				2
					2	1		2
					1	1		
	1							
		2	1		2	2		
					1	1		
							1	
2	4	2	4	1	3		4	1
			1		1			
	1			3			4	
	2							
	2	2	9					1
								1
2	1	2	2			1	1	1
	2		1	1		2	1	1
				1				1
2	1	1	1			1		
1	1	1	2	1	4	3	3	
						1		
			1			1	1	
	1		1					
				2			1	
		1	1		1	1		1
	1			2			1	
				1				1
				2			1	



BnATG4b	BnATG4c	BnATG4d	BnATG4e	BnATG5a	BnATG5b	BnATG5c	BnATG5d	BnATG6a
								1
								1
								1
								1
							1	
						1		
					1		1	
1	2	1	2	3	1	3	1	1
				1		1		
			1					
1	1	1	2					1
	1							
	1							
					1		1	
							1	
						1		
1		1						1
	1	1						2
				3	2	2	3	2
				1		1		
					2			
1	1	1						
			1					
		1						
	2	2	2		1			1
				1	2	2		
1		1						1

2	3	2	2	1	1	1		1
	1		4	2		2		1
1		1						1
							1	
					1		1	
		1		1		1	1	2
								1
						1	1	
							1	
1								
	1		2	6	5	6	9	2
	1							
	1		1					
			3	1	1	2	3	
1	2	3				1		2
3	2	3	1	6	2	5	2	2
1	3	3		1		2		2
1		2	1		2		2	
				3	1	2	1	
3	1	3	2	3			3	1
				1	1		2	
1		1		1	1	1	1	
							2	
1		1						
	1	1			1			
1		2	1		1		2	
				1				

BnATG6b	BnATG6c	BnATG6d	BnATG7a	BnATG7b	BnATG8a	BnATG8b	BnATG8c	BnATG8d
			1	1	1			
1								
1								
				1				
							1	
				1				
	2		1	2				
				1				
	1				1		1	
				1	1		1	1
				1	1		1	1
	1							
				1		1		
	5	2	2			1	2	
1								
	1				1		1	1
				1	1			
1			7	1	2	1	1	

			1					1
	1		1	1	1		1	1
2			1	3	8		3	2
1	2		2	1			1	2
	2			1			1	1
							1	
1			1					
1								
		1		1			3	
1								
								1
1			1	3	4		1	2
					1			
					2			
				1			1	2
2	4		1	5	2	1	2	5
	3	1		1			2	2
						1		1
1	2		1	2	2		2	2
	1			3	2	6		1
					1		1	
1			1	1		2	1	
				2			1	
	4	2		1		1	1	1
1				1	2		2	1
						1		1

BnATG8e	BnATG8f	BnATG8g	BnATG8h	BnATG8i	BnATG8j	BnATG8k	BnATG8l	BnATG8m
	1	1	1					1
							1	
							1	
							1	
					1			
				1	1			
1								
1			1		1		1	
1				1		1		
						1		
1					2	1		1
	1	1			1		1	1
	1	1			1		1	1
					1			
4	3	3				3		
		1		1	1		1	
1	1	1	1				1	
		2			1		1	1
						1		
								1
						1		
					1			
		1	1					1
1							1	
5	5	5		1	4	4		2
	1							

		2	1					1
2	1	2	3	1	4		3	8
2		1						
			2	1				
		1						
1				1	1	1		
		2	1		1	1	1	
							1	
3	4	2			1	3	1	4
					1			
								1
1								
	1	1			1			2
2	1		1				1	
3	2	2	2	3	2		2	2
4			1	2			2	
	1		1					
2		1		1	1			2
2	3	3			6	4		2
1	1	1					1	
			1					1
1	1	2	1		1			
			1					
			1					
	1		1	1			1	2
	1		1					

BnATG8n	BnATG8o	BnATG8p	BnATG8q	BnATG8r	BnATG8s	BnATG8t	BnATG8u	BnATG8v
1								
				1				
				1				
		1			1		1	
								1
	1							
								1
					1			
	1		1	1			1	
1	1		1					
1	1		1					
	1							
	1	1	1	1			2	
		1			1			1
			1					
							1	
		1						
				1			1	
				1			1	
	1		1					
		1						
			1					
						1	1	
2	1	1	5		2	4	3	1
1								

					1			
		1	1	1	2			
2	4		3			1	1	
	2			1		1		
				1				1
			1					
		2						
		1						
						1		
		2	1	2				
				1				
				1	2			
3	1	3		1		1	2	
		1						
	1				1			
		1	2	1			1	
			1	1			1	1
2	5	2		2			3	2
1			2	2			2	3
1	1		1	1				
2	3	1	1	1			1	1
5	2	1		1	2	1	3	1
				3			1	
				1		1		
	1		1		2	1		
				2		1		
	1		2	1			1	
		1		2	3	1		
1	1		1	1				



BnATG8w	BnATG8x	BnATG8y	BnATG8z	BnATG9a	BnATG9b	BnATG9c	BnTORa	BnTORb
1								
							1	
	1		1					
				1				
1				1	1	1		3
			1					1
		2				1		
	1		1		1	2		
	1		1		1	2		
						1		
	1		2	1				
	1				1			
	1			2		1	4	2
1					1			
	1					1		
3		1		1		1		
	1	1		1	1			
	1							
1	1				1	1		
			1					
	1	1				2		
					1		1	
		1						
					2			
								1
1		5	3	1		1	2	1

						1		
	1		2					2
	1	5	2	3	3			
	3	2			1		3	
		1						
						1		
			1	1				1
1								
								2
	2	1			1	1		1
		1						
				1				
1	1		2	2		4	2	5
		1						
						1		1
					1			
1								
1		2						
3		1				1	1	
2	3	2	1	3	1	1	4	4
3	1	1				1	2	1
1					1			
	2	1	1	1			3	1
4	4		4		2	2	6	2
	1		1			1	1	
		1	1			2		1
	1	1						
1	1	2						
								1
1	2		2	1				4
1					1			

BnTORc	BnVPS15a	BnVPS15b	BnVPS34a	BnVPS34b	BnVTI12a	BnVTI12b	BnVTI12c	BnVTI12d
						1		
				1				
				1			2	1
				1			2	1
							1	
			1					
3	2	1		1	1	1	1	1
	1							
	1							
		1						
		1						
	2	1				1		
	2							
	2							
						1		
		3	1	1	3	2	1	4
	2	1			1			
				1				
					3		1	
1		1				2		
						1	1	1
								1
				1	1	1		
		1						
	2							
	1			1			1	
1						1		
2	2	1	5	3		3	2	1
1								

1					1	1		
			1					
1					1			
	6	1	1	2			1	
2				4		2	1	2
				1				
	1							
1		1						
	2	1		1				
							2	1
				1			2	1
1	1					1		
1	2	1		1	1		4	5
1								
	1			1		3		
	1			2				1
7	2	1		3	1	4	4	4
1	1			2		1		1
						2		
2				2		3	2	2
2	2	3	2	2		1	3	3
1							1	
	1		1					2
1	1				1	1		1
				1			1	
		2				1		
1	1							1
						2		

BnVTI12e	BnVTI12f	BnVTI12g	BnVTI12h
			1
			1
		1	
		1	
		2	
	1		
1			2
		1	
		1	
	1	2	
1	2		
2			
		1	
1	1	2	8
			2
	1		

			1
	1		1
		2	
	1		1
	1		
2		1	
			1
	1		1
	4	5	3
		1	
	1		
		1	
	3	3	4
		2	
1	1	1	
		2	2
2	2	2	4
1			
	1	1	
			2
1	1	2	
1	1	1	