

Supplementary A. Tables and Figures

Table S1. Homology analysis of the deduced amino acid sequence of *BocMBF1c* with other MBF1 proteins.

No.	Protein Name on NCBI	Origin	Coverage (%)	Identity (%)	Accession No.	Amino acids
1	BnaC07g07150D	<i>Brassica napus</i>	97	99	CDY39547.1	215
2	multiprotein bridging factor 1c	<i>Arabidopsis thaliana</i>	97	94	NP_189093.1	148
3	multiprotein-bridging factor 1c	<i>Arabidopsis lyrata</i> subsp. <i>lyrata</i>	97	94	XP_002883523.1	148
4	Multiprotein-bridging factor 1c	<i>Morus notabilis</i>	97	81	XP_010088841.1	147
5	multiprotein-bridging factor 1c	<i>Cucurbita maxima</i>	100	81	XP_022965996.1	145
6	Multiprotein-bridging factor 1c	<i>Morus notabilis</i>	97	81	XP_010088839.1	147
7	multiprotein-bridging factor 1c	<i>Cucurbita moschata</i>	100	80	XP_022937454.1	145
8	multiprotein-bridging factor 1c	<i>Vigna radiata</i> var. <i>radiata</i>	97	77	XP_014509028.1	145
9	Cro/C1-type helix-turn-helix domain	<i>Macleaya cordata</i>	97	76	OUZ99914.1	145
10	Helix-turn-helix type 3	<i>Corchorus capsularis</i>	97	76	OMO86847.1	143
11	multiprotein-bridging factor 1c	<i>Olea europaea</i> var. <i>sylvestris</i>	99	76	XP_022854816.1	146
12	multiprotein-bridging factor 1c	<i>Carica papaya</i>	97	75	XP_021903179.1	145
13	multiprotein-bridging factor 1c	<i>Prunus avium</i>	97	75	XP_021827691.1	144
14	Helix-turn-helix type 3	<i>Corchorus olitorius</i>	97	75	OMO58072.1	143
15	multiprotein-bridging factor 1c	<i>Arachis ipaensis</i>	97	75	XP_016200918.2	144
16	multiprotein-bridging factor 1c	<i>Arachis duranensis</i>	97	75	XP_015966499.1	144
17	multiprotein bridging factor 1	<i>Gossypium hirsutum</i>	100	75	AFN70435.1	145
18	HTH_3 domain-containing protein	<i>Cephalotus follicularis</i>	97	74	GAV79506.1	144
19	multiprotein-bridging factor 1c	<i>Prunus persica</i>	97	74	XP_007202731.1	144
20	ERTC family protein	<i>Populus trichocarpa</i>	97	74	XP_002324409.1	145
21	multiprotein-bridging factor 1c	<i>Manihot esculenta</i>	97	74	XP_021606733.1	144
22	multiprotein-bridging factor 1c	<i>Phalaenopsis equestris</i>	97	74	XP_020582421.1	148
23	multiprotein-bridging factor 1c	<i>Cajanus cajan</i>	97	74	XP_020233248.1	146
24	multiprotein-bridging factor 1c	<i>Jatropha curcas</i>	97	73	XP_012076664.1	144
25	Helix-turn-helix type 3	<i>Cynara cardunculus</i> var. <i>scolymus</i>	89	73	KVI01255.1	129
26	multiprotein-bridging factor 1c	<i>Spinacia oleracea</i>	97	72	XP_021838271.1	145
27	multiprotein-bridging factor 1c	<i>Hevea brasiliensis</i>	97	70	XP_021665665.1	144
28	multiprotein-bridging factor 1c	<i>Dendrobium catenatum</i>	98	70	XP_020699739.1	148
29	ethylene-responsive transcriptional coactivator	<i>Hevea brasiliensis</i>	97	70	AGQ57014.1	144
30	multiprotein-bridging factor 1c	<i>Helianthus annuus</i>	97	68	XP_022027306.1	145
31	Multiprotein-bridging factor 1c	<i>Capsicum chinense</i>	100	68	PHU17242.1	143
32	ethylene-responsive transcriptional coactivator	<i>Solanum lycopersicum</i>	97	66	AAD46402.1	146

No.	Protein Name on NCBI	Origin	Coverage (%)	Identity (%)	Accession No.	Amino acids
33	ethylene-responsive transcriptional coactivator	<i>Solanum lycopersicum</i>	97	66	NP_001234468.2	146
34	ERTC	<i>Populus tomentosa</i>	97	66	AGM20673.1	218
35	multi-protein-bridging factor 1c	<i>Sorghum bicolor</i>	99	65	XP_002438624.1	155
36	multi-protein-bridging factor 1c	<i>Ananas comosus</i>	98	64	XP_020088046.1	144
37	multi-protein-bridging factor 1a	<i>Arabidopsis thaliana</i>	95	48	AEC10155.1	142
38	multi-protein-bridging factor 1b	<i>Arabidopsis thaliana</i>	95	51	CP002686.1	142

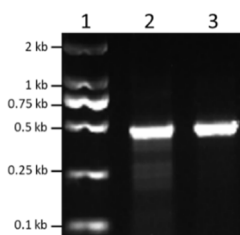


Figure S1. The results of the coding sequence (CDS) amplification of *BocMBF1c*. 1. The channel of Maker, M2000, was used as a DNA ladder, yielded bands of 2 kb, 1 kb, 0.75 kb, 0.5 kb, 0.25 kb, and 0.1 kb from up to the bottom in the lane; 2. and 3. amplicons of *BocMBF1c* CDS from gDNA and cDNA, respectively.

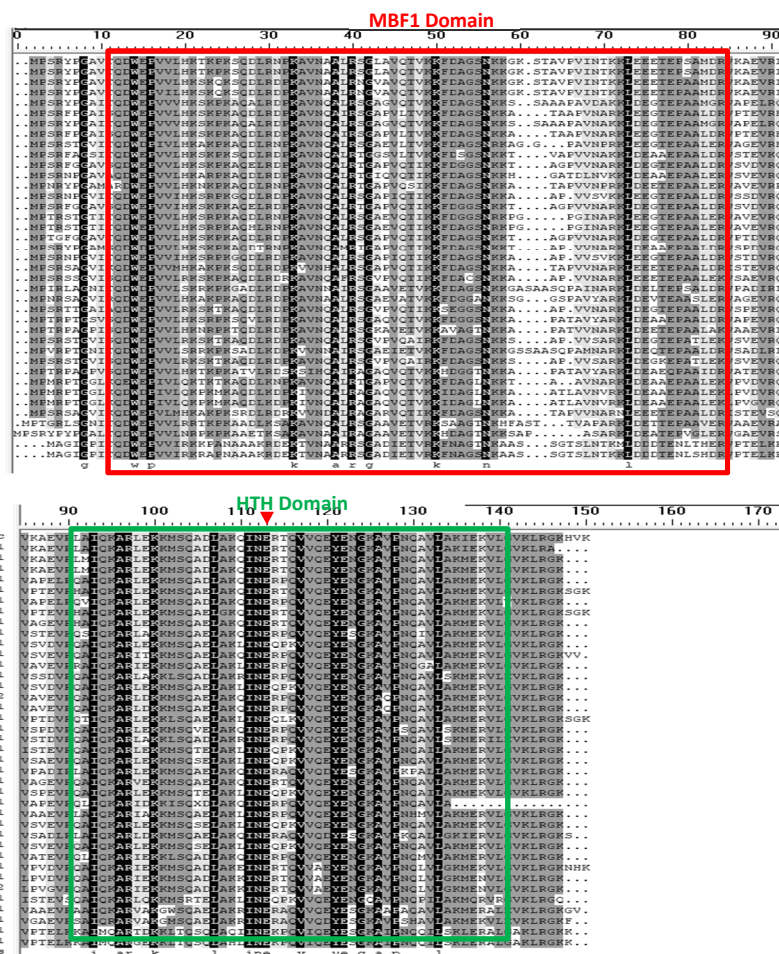


Figure S2. Multiple alignments of the predicted amino acid sequence around the conserved domain of MBF1 and HTH from *BocMBF1c* with various other similar proteins. The 38 proteins used in this

program are listed in Table S1. Gaps are indicated by a solid circle; conserved amino acids are shaded black and similar amino acids are shaded gray. Red underlines indicate the *MBF1* gene family domain; green underlines indicate the HTH domain.

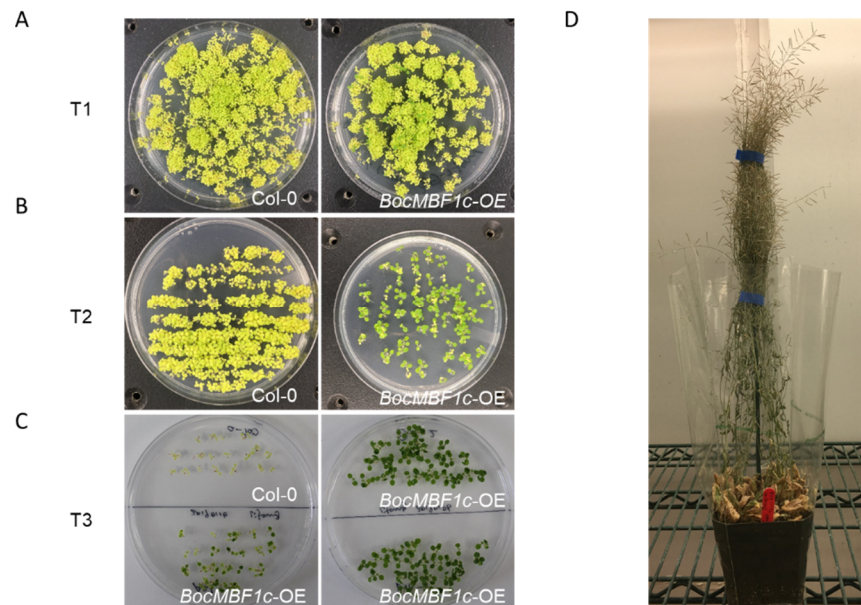


Figure S3. The selection of homozygous transgenic lines of *BocMBF1c*. (A) The T₁ seeds that survived the Kanamycin selection were collected as positive transgenic lines; (B) the T₂ generation showing segregation of resistant-to-sensitive under Kanamycin selection; (C) the T₃ generation showing 100% resistance to Kanamycin were chosen as homozygous transgenic lines for further study; (D) the T₄ seeds that will be mix harvested from T₃ generation.

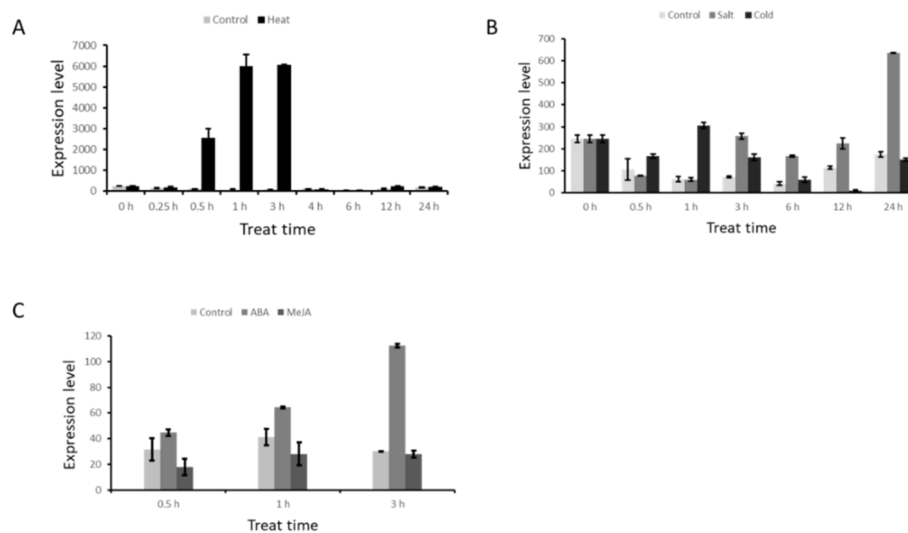


Figure S4. Response of *AtMBF1c* to various abiotic treatments. (A) Temporal expression of *AtMBF1c* under heat treatment (30 °C). (B) Temporal expression of *AtMBF1c* under cold condition (4 °C) and salinity environment (200 mM NaCl). (C) Temporal expression of *AtMBF1c* after applied ABA (10 μM), MeJA (10 μM), respectively. All data were obtained through an online database (http://bar.utoronto.ca/efp_arabidopsis/cgi-bin/efpWeb.cgi) [18].

Supplementary B. Supplementary Sequences

B1. Sequence of the *BrMBF1c* Gene

AAAAAGTATAAATGAATAAAAAATAATAGTAGCTGCAAAAAAAGTTTTCAAAAAA
TTAATACCATAAACAAAACACTAAACTCTAAATCTAAACCCTAAACTCTTTGGTAAACCCT
AAACCCTTTGATAAAATTTTAAATTCTTGAATTTAAAAAATATTTTAAATACAATCAACA
AAACACTAAATCCTAAAACCTAATCCTAAACCCTAAACCCTTGGGTAAATCCTAAAAA
ATTCATTTTTTTGCGATTAAAAAATCTTCTTTTGTGATTAATACAATTTTTATTTAAAAATA
TAATATAGTTCGATAATATTTTGTTCCTTTTTTAAAAGATATCAGATTTAAATAACTAAAT
TTTTCTTATTGGTTGGTGAACCTACAGGTTCCCAAGAATAAGTCTTCTATTACTGTCTACAG
TTGGATACAAGACATAAATTTATAGTAACGCCACGTCACCTACAATAACACCCAATAAAAC
AAGAACACGTCACCAGCCTAAGAACTGTCCAGAAACGAAAATGGAGTGAT**TCGA****ACTCTCC**
AGAA**ACTCGT**CTCCTTATATAAAGACCTCTCCTCCAGCGACGCCTTCATCGTTCTCAATTT
CAGAACTCATCATTATCATCATCTCTCTGAGATATCAAGTTTTAAACAACAGCGACG**ATG**
CCGAGCAGATACCCAGGAGCCGTGACGCAAGACTGGGAGCCAGTGGTGCTCCACAAAACC
AAGCCAAAGAGCCAAGACCTCCGTGATCCCAAGGCGGTCAACGCAGCTCTCAGAAGCGGC
TTAGCGGTTCACTGTGAAGAAATTCGACGCAGGTTTCAACAAGAAGGGCAAATCGATG
GCGGTGCCGGTGATCAACACGAAGAAGCTGGAGGAAGAGACGGAGCCGTGCGCGATGGA
TAGGGTGAAAGCGGAGGTGAGGCTAGCGATACAGAAAGCTCGGTTGGAGAAGAAGATGTC
ACAAGCGGATCTAGCGAAACAGATCAACGAGCGGACACAGGTGGTTCAAGAATACGAAA
ACGGGAAAGCTGTTCTAACCAGGCCGTGCTTGCCAAGATGGAGAAGGTTCTTGGTGTTAA
ACTCAGGGGTAAACATGTCAAAT**AATT**CAAAACGATGCCGTCTCTGGTTTCGTTCTTCCTTC
TTTTGGGTGCACGTCTAATTTTCGTATTCTCAATCTTATGAATATAAATAATAACGTTTTGGC
TTCGTATTCAAACG**ACATCGTATCTGGCAAACG**ATTGTCAAATTTGAAAAGGAAGTGGGTT
TGTTCTGTTTGATTAACTTGAATTTCTTCATACATGAGTCATGACTGGTCTAAATATTTCTTA
TTTGCATGTATAATTGTATTCTGTAAATCAACAAGATTAATAATCCTTTTTTAAACAAAGTC
GGTGTTTTATGGACATCTCTGGACTTGGTCTTATAGGTCTAATGGGTTTGTGACTCAGAACTT
CTTGGTTATCATATAAATTTAGAAATGAATCAAGAAATGTGTAATGGTAGCGTGACATCTG
CATCTGTGAGTAAGTTACTCGGTTTCGATGAAGCATCCTTTGTTTCTAAGCGGGAGTCCAAAC
TAGACAGAATCAGTATTTGTAACATGTTTAGATTTTTTAAAGTACATTAAATACAACGAAAAG
TAAGCAGAAAGAATGCTCAAACAATTTGATAGGTAAAAGTTTAAACTTTATTTCAAATTT
GCTAACGTTTAAAGAGACGAAACCATTTAGCAAACCTGAAAAGATTGTAACCTGGTACTCCCT
TACCTACACGTCACGATCCCTCTTTT

Start code and stop code were in bold. Primers designed from *BrMBF1c* gene, including MBF1c-up and MBF1c-dw were marked in red.

B2. Promoter Sequence of the *BoMBF1c* Gene

TTGCAAAGGCAGCACCAAAACTCTTCAGTTCTGTTGCCATACGGGAAACTTCTGAGGAAAC
ACGGTTCAGCTCTTCTGATACACGACTCAGATCTCCTGAAAGGCGACCTTTTACACAACCTAG
CTATGGAATCTGCATCCACAACATCACTACTCTGGTTTGATTTCTGCTTTGTTGTTTCTCCT
GATCTCTGCTTCACTTCTTGTTCCTCCCGCATCTTACAACATCTGATTTTGAACACCTCCC
GTAAAAAAGAATGCTTGAATGGAAATCCATCGTCGATTAACCTTTAGCAGATTTTGTACA
CCGACATCTTCTTCATCATCAGACCACCCAAACTG**AGAATCCCCATTGACAGCCT**CGTTCCC
AACCGAAATAATGGAAACCACCCCGCCTGCCGTTGAAATTGATGTCAGTCAAGATTACA
ATAACATATTATAGCAGATGTTATTTTCCTACTATATTACCTTTCCAGAACAGTCAGTATCA
CGGGCATGCCCTGGACTTATACTTCGCTTCCCTTTTCTTCTTCTGAAAGTTCGTCGTCGT
CCGCAAAATCGCCTTCCGAACCAGACGAGCCGGCTTCATGAACGGCTTCGGTAAGAGCAG
GTACAGCTTCAATCATTACAAGCTGTAAAGCTAGCACAAATCCCTTTAGAGCTATTGTGTTT
TGGGATAGAGAAAGTTTGTTCCTCTCTTTGATACTGCTTATAAGCAACGCGACCCCAAGGAT
ATGCAAGAAACGCATCCAAATCTTTAATCTTCTCCGCATGTTTCGTGTGAAATCCGAGGTGTA
TGAGTTGTTGGGAGAACAACAGATGCAAGGAGTGCAAGGAACGCATACTTAATCCTTGTTT
CTTTTGCAGTTACACTTCTCTTTTTCAACATCCTTACAACACAGTTGGCAGATACTTCTTTCA
TGGTACTGAATATGGCAAATTCCTCAGAGAAAATCGGATTGGTTTGCCTGCAAACAAGAA
CCATGCTTCATGTTTCTTCTTCACTTCAATTGCCTCGATATAATATATCTCCCAAACGTCC

TGAGAATGTTGGTTTCTCCGCGATTTCTACAAGCTTACCGAACGGTGATCGGCGCAGAGCAT
CGACTTCATCTTCTTCCAGTGATCGGCGCAGAGCATCGACTTCATCTTCTTCCAGTGACCGG
AGTATGTTACTTATTGCGAAGGGTTTGTGGTAAGGGGTAAGTCTCACCTCCACGGGTTCCTC
GCCCAAAGCAAACATCCTCTCCGGTAATGTTGCGGAAGACTCCATATCTGCTCGATTTTCCA
TCTCCATCGTTGGTACCGATGTCATCAATCAAAGAAGATGAGCAAAAAGCTTAGGGAGAG
AGTTTCCAGATTTGAGACAAGTTCTACAGAGAAGGTCCATTTTAGAGATGATTTCAAATTC
GAAATACAAAATTGAAATTACAAAGACATATAATCTTTCAAGATTTGGGTTTTCTGACACA
AAATACGAAGATACGAAAATATTTCAAATATCATGGATACGCAAATCTTTGTAAATCTTAA
CCAATAGATTACATAATCTTTTAGGACGCAGACGCATGGGTGATATCGATAGGGGTAGCGC
TGTCTTTACCATCTGATGAACAGTTGCAATTAGCTCGAATTGGTATATGCCTAAATACGCAA
TATGTTGAGTGCAGGGAGTGCAATTTCACTAATATGTATTGCAGTATTTAGTTTGTGTTCT
GGATTGCTCATTTACCATTGGAAGCCTAAAGCATCATTGGCTTTGCATTTTTCGACTCTTCAC
GCTAGAGGTCCTAAGGGCATCATTAAACCCAGGTCTCTTAGCCGGAGTTTTTAAGTCAATGATT
TGATATTTTTTTGTTTTTTTTTACATTTTTTTTACTAAAAAACATCTCTTATATCTCTTATTTA
AGAGACGGTTCTTAGTCGAACCTAAGAATTTAGTTAAGAGACTGGGGTTAGTGATCGTCCG
GACGAACGTGAGATACTTTTCTATTACTGTCTACCATTAGATAGAAGACGAGTTCATTTAGA
TAAATTTATAGTGACGCCACGTACCTGCAATAACACCCAATAAAACAAGAACACGTCAC
CAGCCTAAGAAGTGTCCAGAAACGAAAATGGAGTGATCGAACTCTCCAGAAACTCGTCTC
CTTATATAAAGACCTCTCCTCCCAGCGACGCCTTCATCGTTCTCAATTCAGAAACT. Primer
MBF1cP-F is in red.