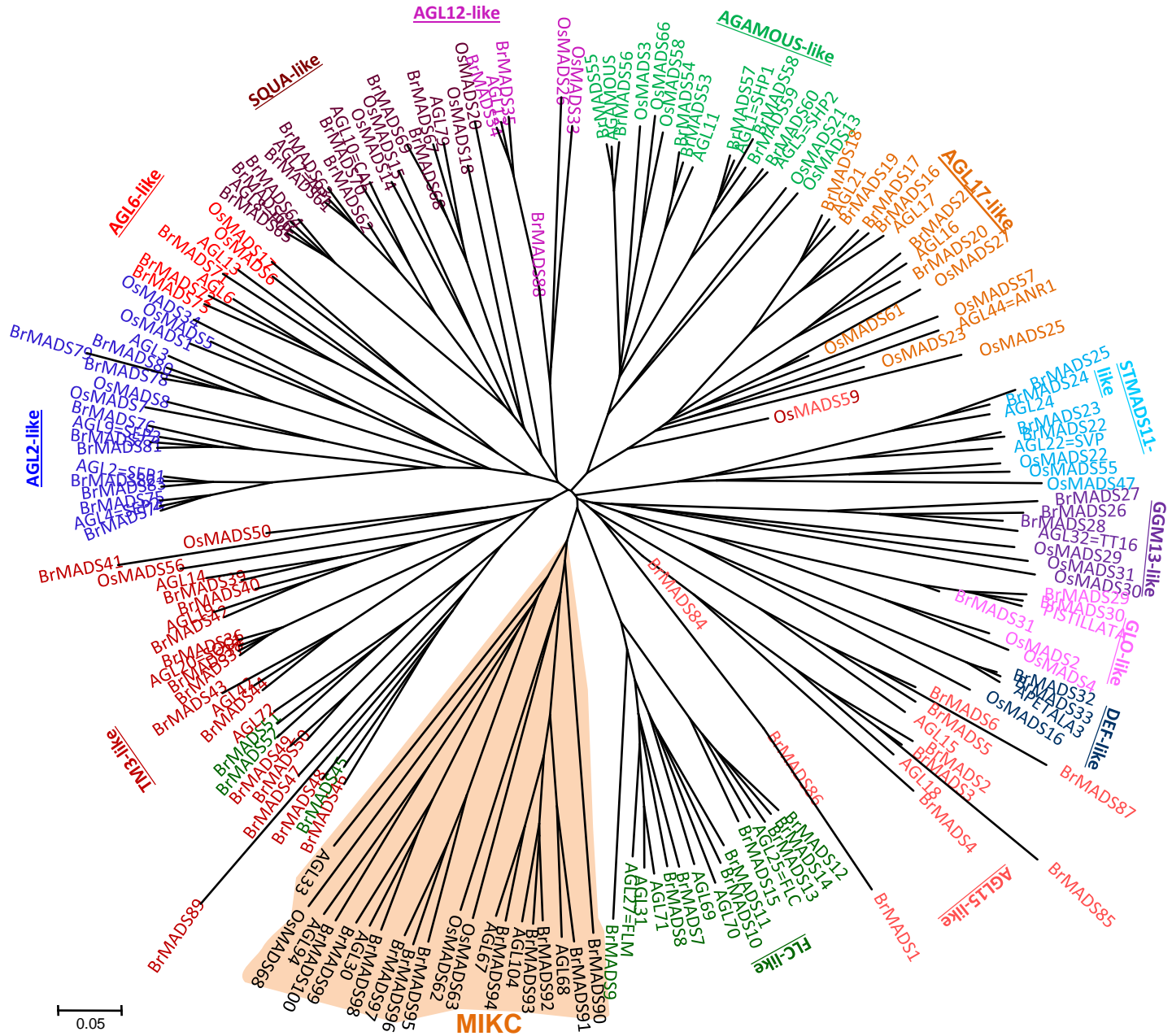


Additional file 2: Figure S1 (a)

Phylogenetic analysis of 138 type I MADS-box proteins from *B. rapa* (67), *Arabidopsis* (43) and *Rice* (28).

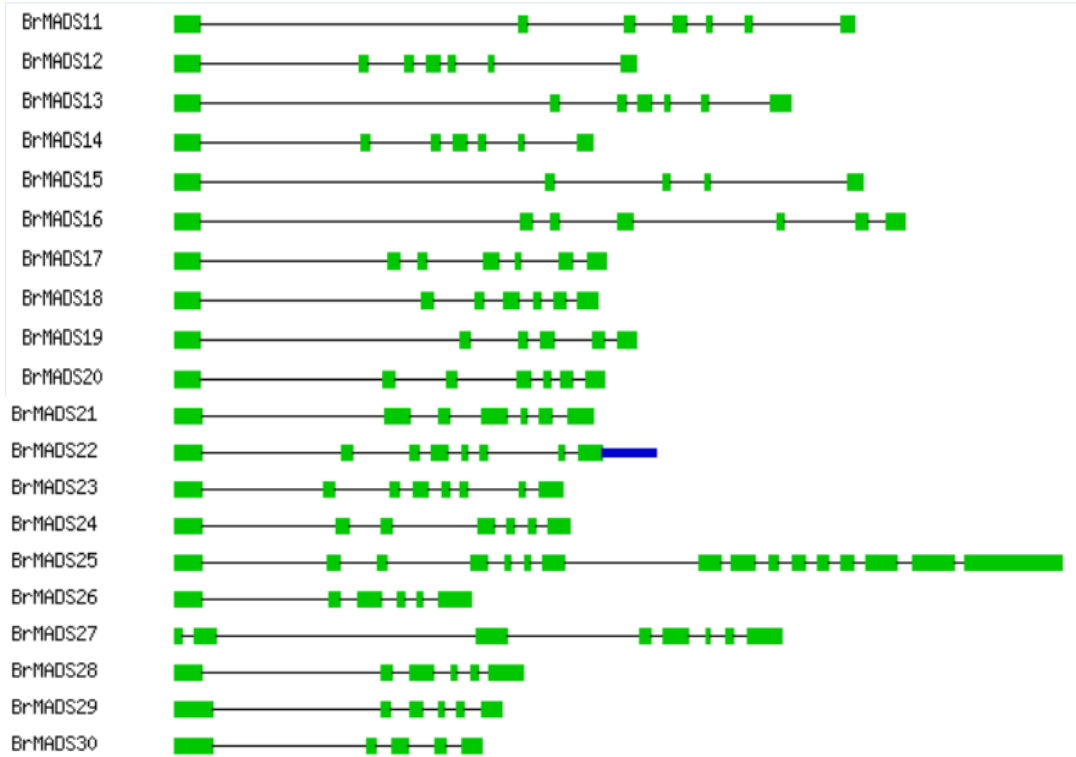


Additional file 2: Figure S1 (b)

Phylogenetic analysis of type II *B. rapa*, *Rice* and *Arabidopsis* MADS-box proteins. 181 type II MADS-box proteins from *B. rapa* (100), *Arabidopsis* (43) and *rice* (38) showing 13 MIKC^c clades and MIKC* group as marked in the figure.

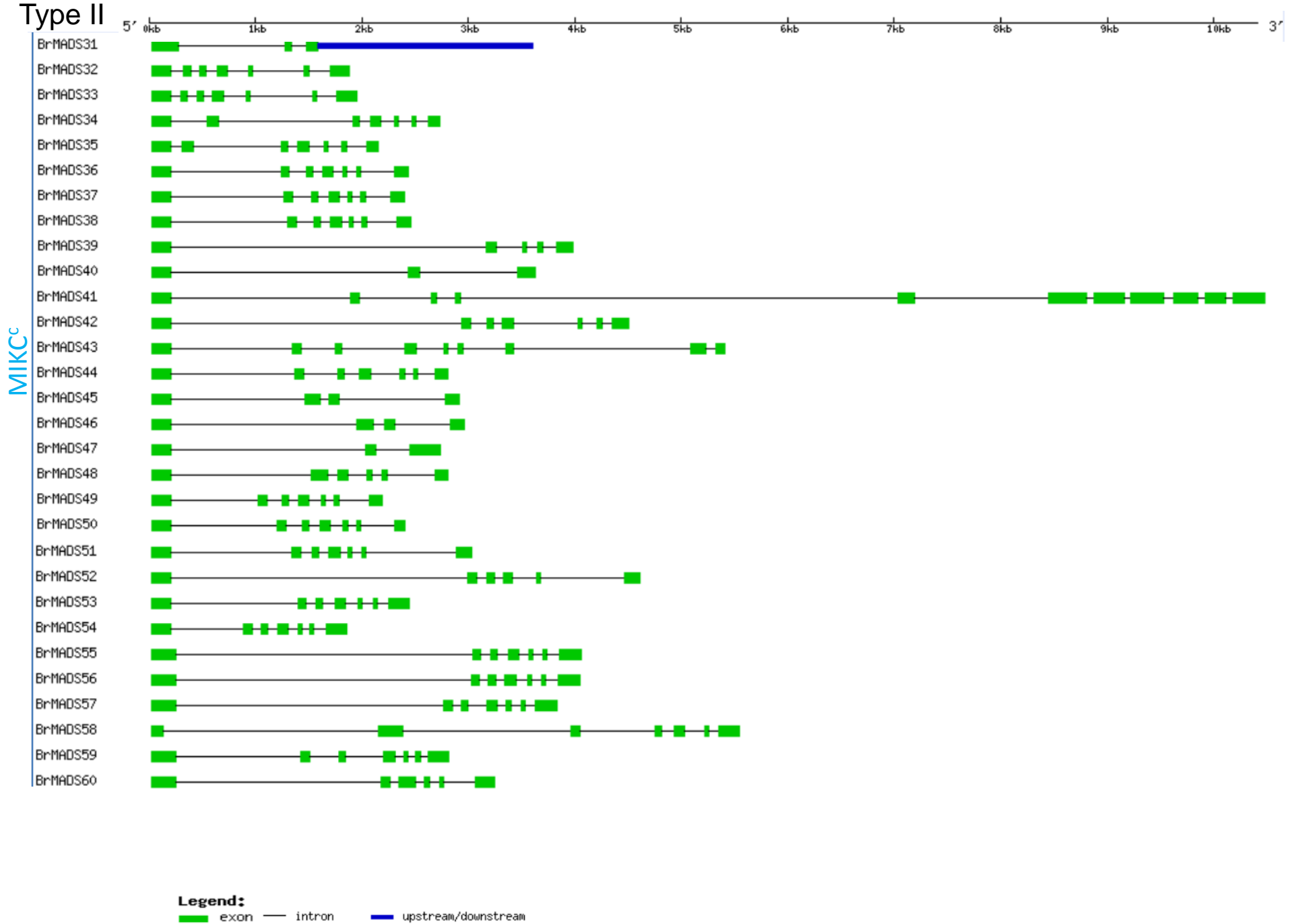
Type II

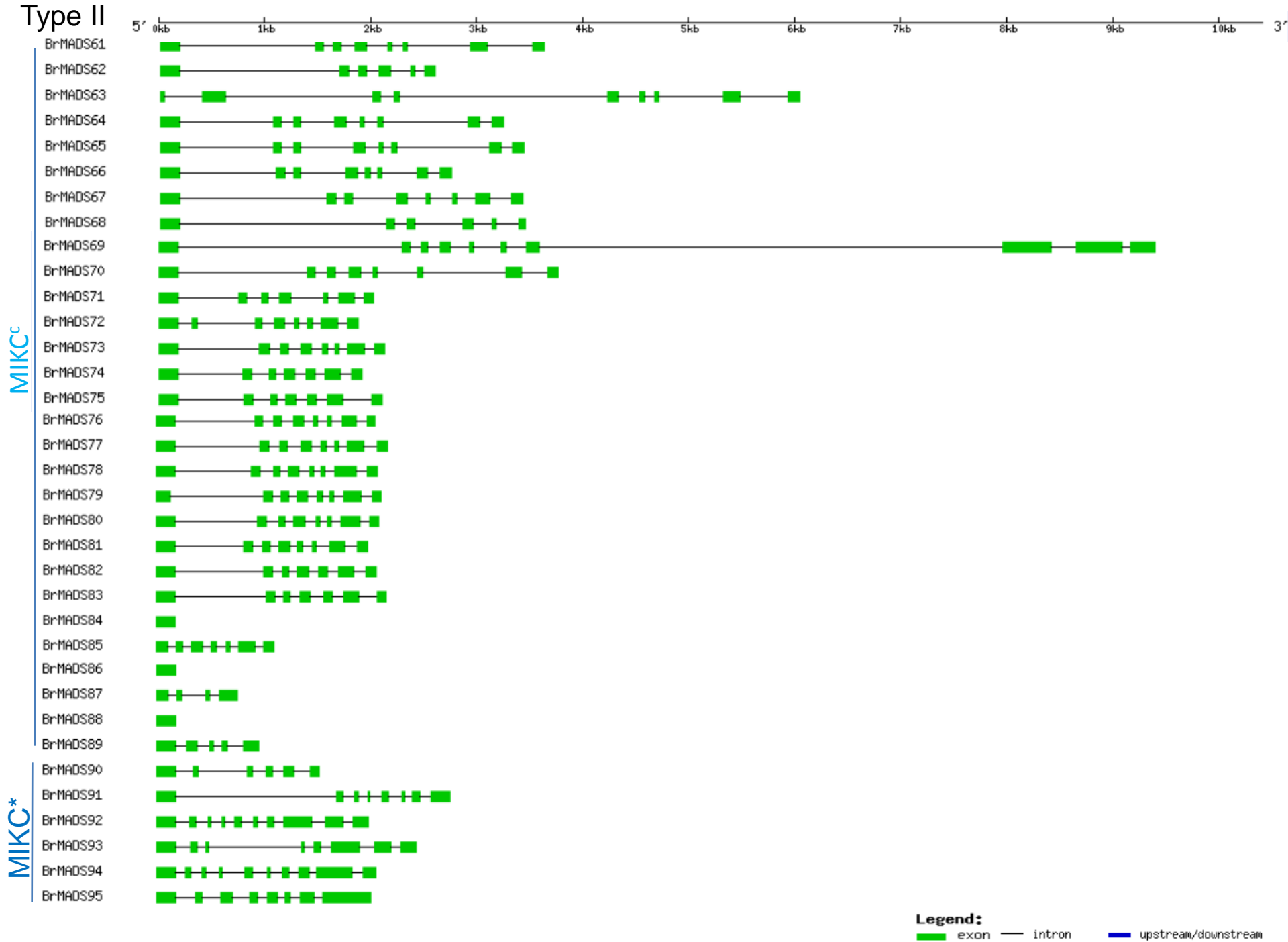
5' 0kb 1kb 2kb 3kb 4kb 5kb 6kb 7kb 8kb 9kb 10kb 3'



MIKCC

Legend:
█ exon — intron █ upstream/downstream

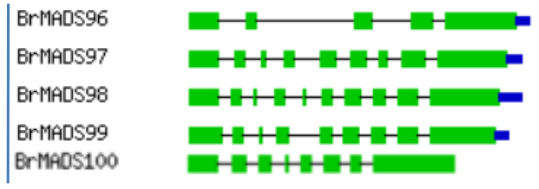




5' 0kb 1kb 2kb 3kb 4kb 5kb 6kb 7kb 8kb 9kb 10kb 3

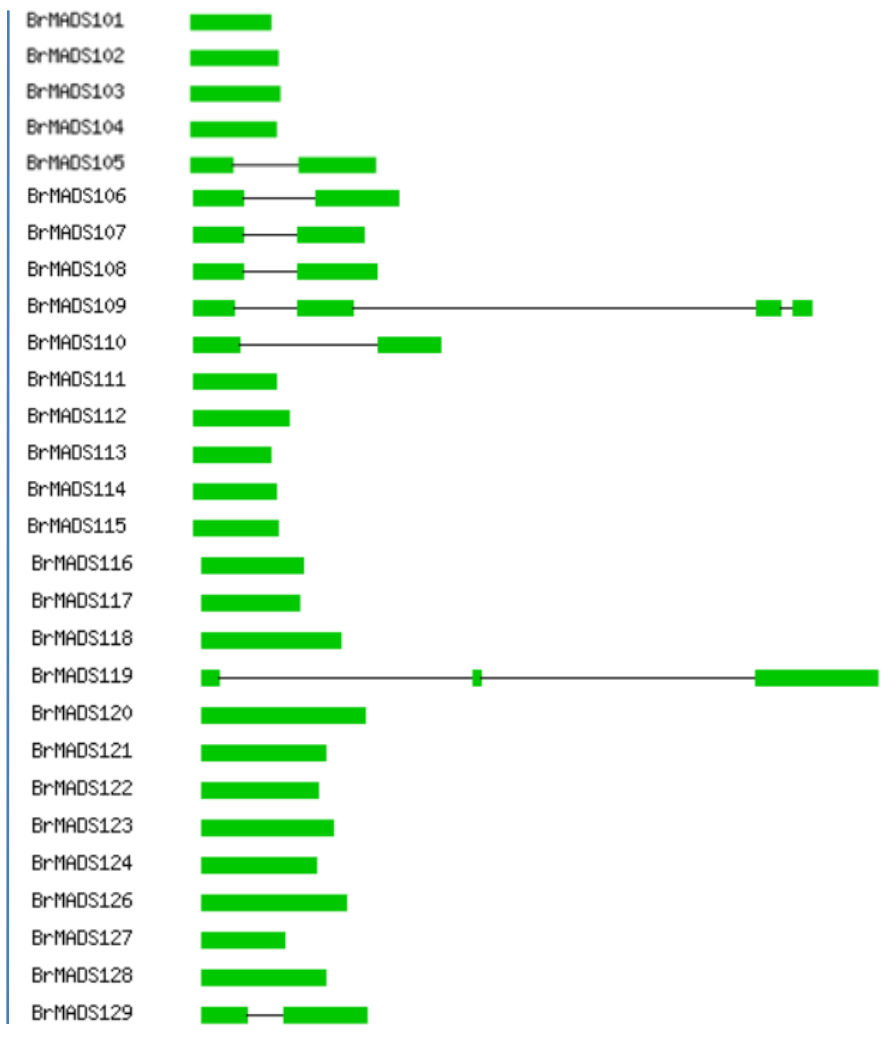
Type II

MIKC*

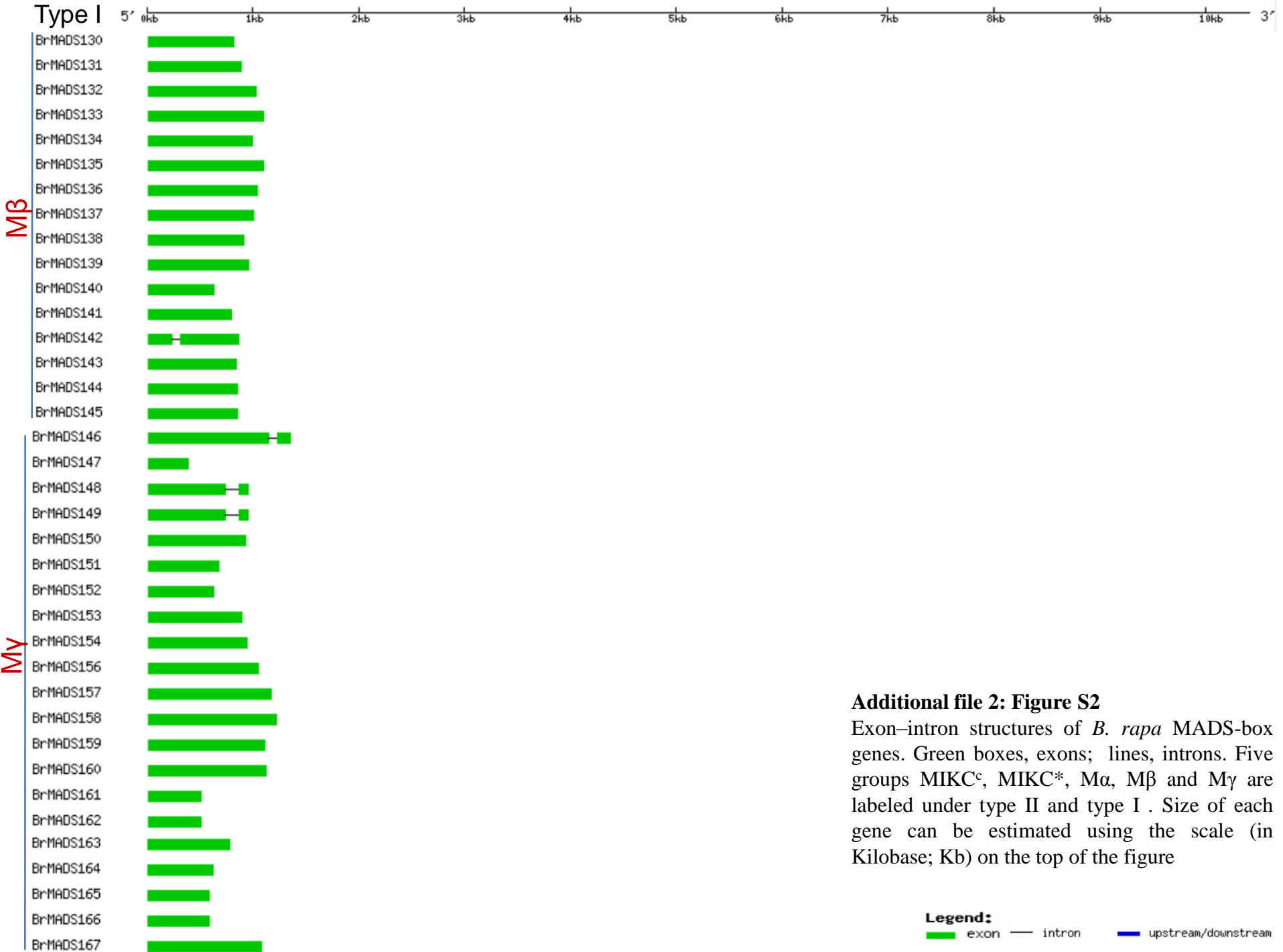


Type I

Mα



Legend:
■ exon — intron ■ upstream/downstream

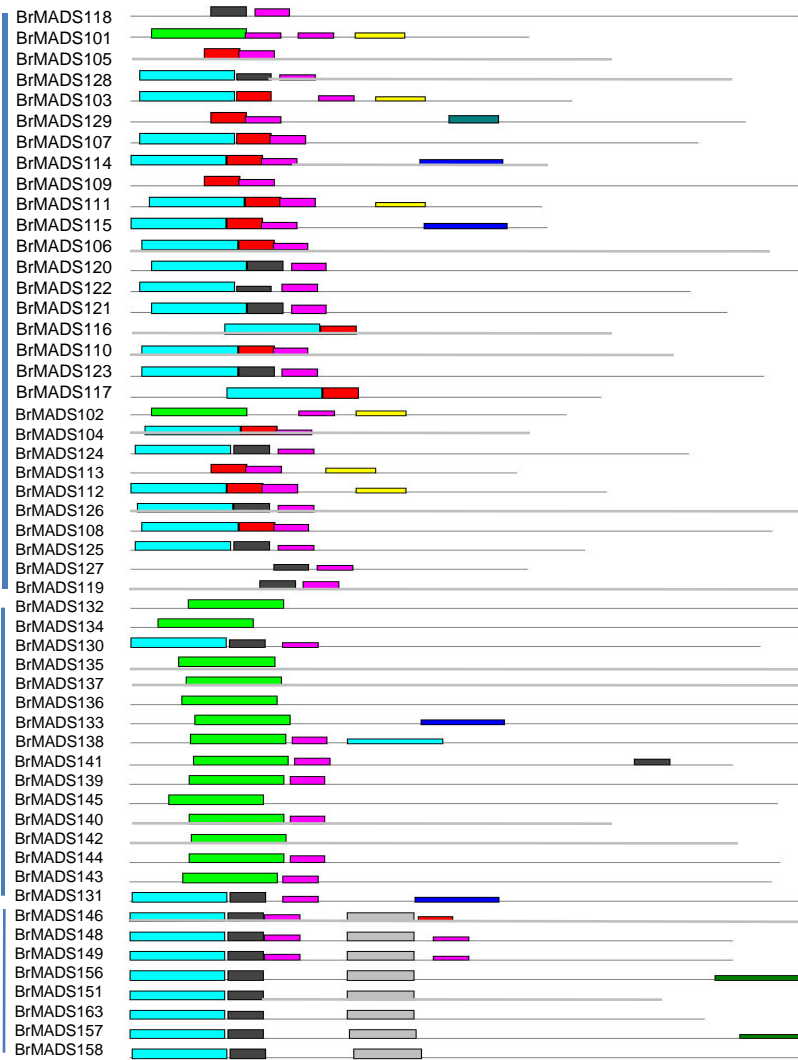


Additional file 2: Figure S2

Exon–intron structures of *B. rapa* MADS-box genes. Green boxes, exons; lines, introns. Five groups MIKC^c, MIKC*, M α , M β and M γ are labeled under type II and type I. Size of each gene can be estimated using the scale (in Kilobase; Kb) on the top of the figure

Protein **Motif location**

name

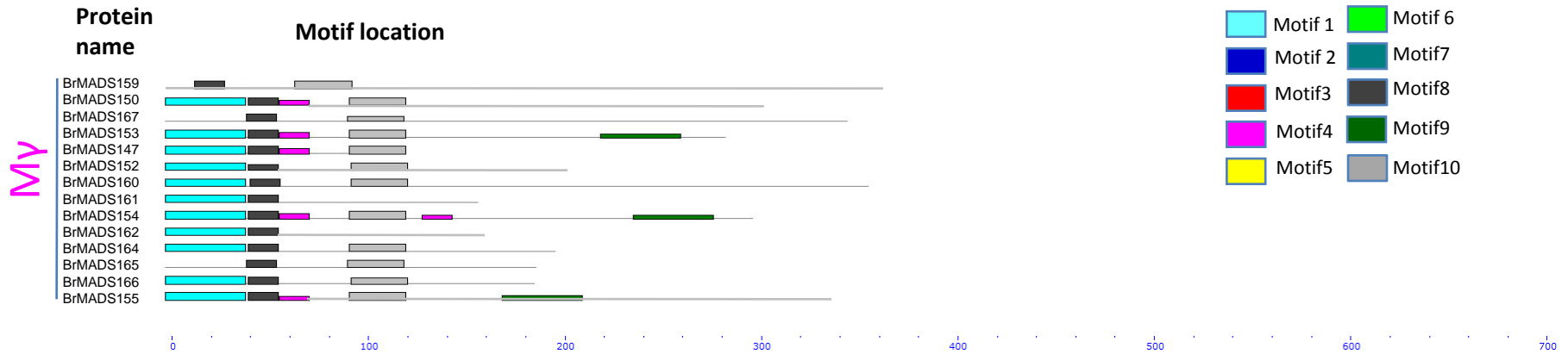


Mα

Mβ

Mγ

0 100 200 300 400 500 600 700



Additional file 2: Figure S3

Distribution of Conserved motifs in *Brassica rapa* MADS-box type I proteins identified using MEME search tool

Schematic representation of motifs identified in *B. rapa* MADS-box type I proteins using MEME motif search tool for each group ($M\alpha$, $M\beta$ and $M\gamma$) given separately. Different motifs are indicated by different colors, and the names of all members are shown on the left side of the figure. The order of the motifs corresponds to the position of the motifs in individual protein sequences

Gene

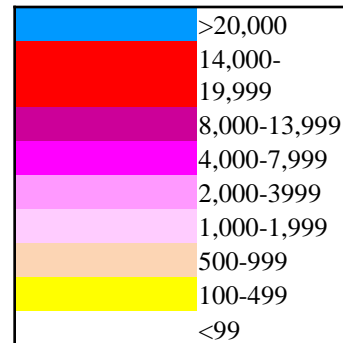
name C1 C2 C3 C4 C5 K1 K2 K3 K4 K5

Gene name	C1	C2	C3	C4	C5	K1	K2	K3	K4	K5
BrMADS1										
BrMADS2										
BrMADS3										
BrMADS4										
BrMADS5										
BrMADS6										
BrMADS7										
BrMADS8										
BrMADS9										
BrMADS10										
BrMADS11										
BrMADS12										
BrMADS13										
BrMADS14										
BrMADS15										
BrMADS16										
BrMADS17										
BrMADS18										
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BrMADS36										
BrMADS37										
BrMADS38										
BrMADS39										
BrMADS40										
BrMADS41										
BrMADS42										
BrMADS43										
BrMADS44										
BrMADS45										
BrMADS46										
BrMADS47										
BrMADS48										
BrMADS49										
BrMADS50										

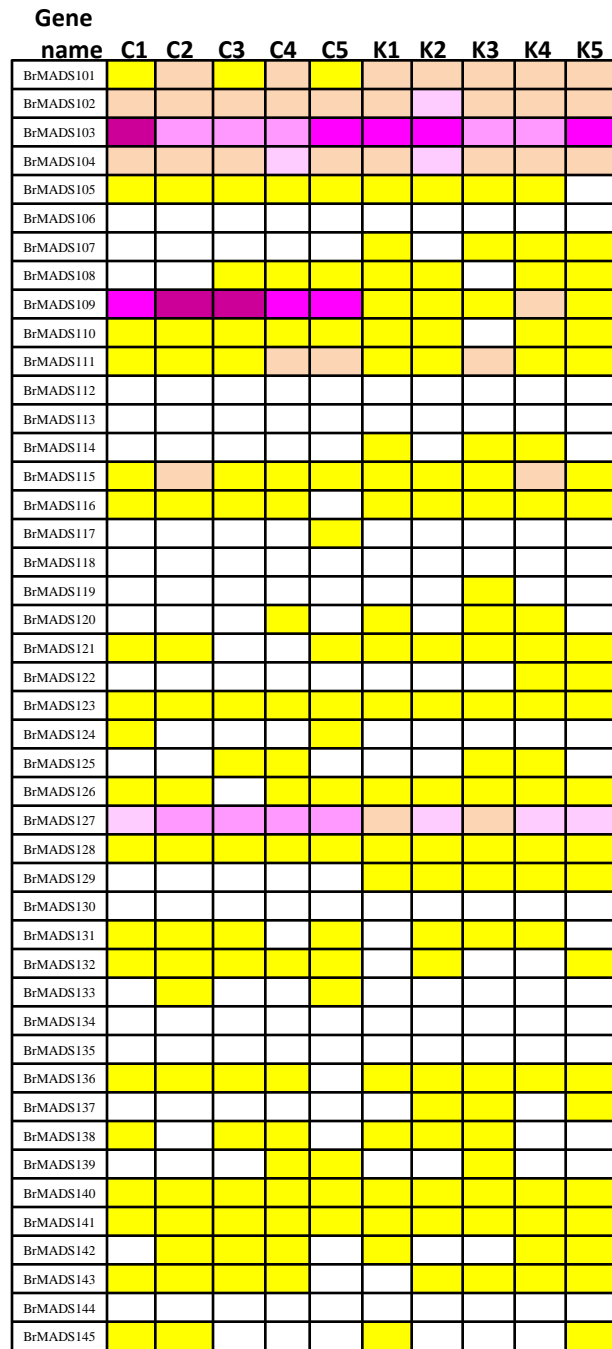
Gene

name C1 C2 C3 C4 C5 K1 K2 K3 K4 K5

Gene name	C1	C2	C3	C4	C5	K1	K2	K3	K4	K5
BrMADS51										
BrMADS52										
BrMADS53										
BrMADS54										
BrMADS55										
BrMADS56										
BrMADS57										
BrMADS58										
BrMADS59										
BrMADS60										
BrMADS61										
BrMADS62										
BrMADS63										
BrMADS64										
BrMADS65										
BrMADS66										
BrMADS67										
BrMADS68										
BrMADS69										
BrMADS70										
BrMADS71										
BrMADS72										
BrMADS73										
BrMADS74										
BrMADS75										
BrMADS76										
BrMADS77										
BrMADS78										
BrMADS79										
BrMADS80										
BrMADS81										
BrMADS82										
BrMADS83										
BrMADS84										
BrMADS85										
BrMADS86										
BrMADS87										
BrMADS88										
BrMADS89										
BrMADS90										
BrMADS91										
BrMADS92										
BrMADS93										
BrMADS94										
BrMADS95										
BrMADS96										
BrMADS97										
BrMADS98										
BrMADS99										
BrMADS100										

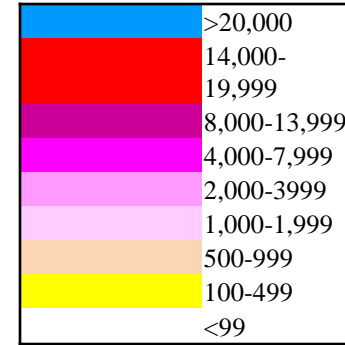
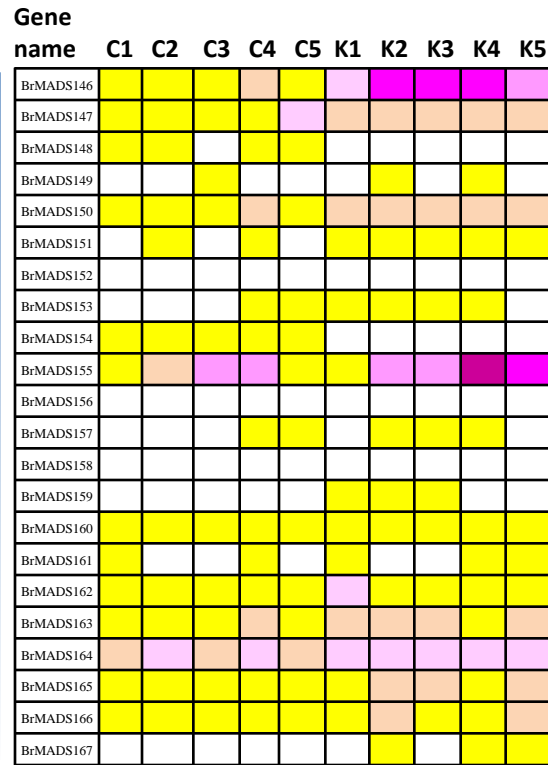
MIK^cMIK^cMIK^{*}

Mα



Mβ

Mγ



Additional file 2: Figure S4

Microarray expression analysis of MADS-box genes in *B. rapa* under different temperature treatment. Here C and K indicates Chiifu and Kenshin, were treated under five (5) temperatures as control (C1&K1), 4°C (C2&K2), 0°C (C3&K3), -2°C (C4&K4), and -4°C (C5&K5). Color bar at the top representing differential expression like purple representing medium level expression where pink to white showing low to no expression