

Supplementary Table 1. Primer information of *BrLIM* genes for RT and real-time -PCR analysis

Gene ID	Primer sequence		Product length
	Forward	Reverse	
<i>BrLIM1</i>	CCAAGTAAGCTATCATCCTTC	AAAGCTGACTGAAATGAACC	211
<i>BrLIM2</i>	GGTGGCTGCCCATTAAACAC	TCATGTTCTTCGTTGGTTTCG	173
<i>BrLIM3</i>	CATACAAAGACTCCAAGCAAG	GAGGACGTGAGCATAGTTGC	255
<i>BrLIM4</i>	CATGTTTCAAGTGCGCTCAC	GCGACTTCTTCAGTGGTCTC	199
<i>BrLIM5</i>	CTTCTCTCAGCTGATGGTGTC	CCGGTTTAACAGGGGACTG	184
<i>BrLIM6</i>	CTCTCTGCTGATGGAGTTAGC	TTTATACCAGCTCAGGACTTG	211
<i>BrLIM7</i>	(1) GTGAACACAACAGAGGAGGT	(2) CATTGACTTTGGTGGTAGGT	180
	-	(3) AACTCCATCAGCAGAGAGAA	306
	-	(4) TTTGGTGAAGCTACCAGACT	444
	(5) CAAGAGAAATGTGCTACTTGC	(6) GATTCAAGGAACCGCCGTTG	284
<i>BrLIM8</i>	GCCATTAAACAGACAAACCAAC	CTCCGTGCGAACACTTGAAG	176
<i>BrLIM9</i>	(1) TTGATATCGAAGTCCCTGAC	(2) AGAGAGATTGCAGAAGCAAG	181
	(3) AGTGAGCACAATCCCTCTTA	(4) GGTGAAAATTCTTGGAGTCA	185
	-	(5) ATTTCTGCTGAGTCCCTGTA	266
	-	(6) AGGAGTTGGCTTGTCTAGTTA	505
	(7) GAGCTGACAAGGACACCAAG	(8) CTCGAGCGCTGCATAGTTC	189
<i>BrLIM10</i>	AGATTGGGAAACCAGATAGAC	CGTGTGTGCACTTGAAACAG	177
<i>BrLIM11</i>	GGGACATTGTACCACAAGAG	TTATCTCCTCCTTCAAGCTG	161
<i>BrLIM12</i>	CGAGGTTCAAAACCATGTCTC	TACGAACCTCCGTTTCTCTAGG	211
<i>BrLIM13</i>	AAGAAATGAGCTTGAAGCAG	CTTAAATTGTCCCTCCTCCT	248
<i>BrLIM14</i>	CTGGAGTGTCTAGACTCATC	TTGTTCTTCCGACAGACAG	216
<i>BrLIM15</i>	GATCGTGCAATCGCATTGTC	GTCCATTCCCGTAAACGTCTC	211
<i>BrLIM16</i>	GTTTTAGCTCACATGTGGTTG	CTGAACCCATCCCCATATGC	209
<i>BrLIM17</i>	CTTCCTCGTCCTCATCTTC	GAGGAGGATGATGATTTGTG	210
<i>BrLIM18</i>	CCTAAATGCGAAGTTTGTAC	CACGTATTGCATGGTAAAGTG	262
<i>BrLIM19</i>	AGCTTAGGTAAAGACGCTGAC	AACAAAGGCTTCGACCAGAAC	210
<i>BrLIM20</i>	GAATGTTTCCACAAGACTTGC	CAGGTTTGTGGTTGTCATGAG	220
<i>BrLIM21</i>	ACATGGAAGGTGAATGTTACC	GATCATCAGAAGGCGGAGTAG	222
<i>BrLIM22</i>	TCTCTCAACGGTGTACTCTAC	TTCAGGAGCTGCTTCTTCTTC	210
<i>Br-Actin</i> (Real-time)	CAACCAATCGTCTGTGACAA	ATGTCTTGGCCTACCAACAA	105
<i>Br-Actin</i> (RT-PCR)	ATGGCCGAGGCTGATGACAT	CGGTTCTTCTTACCGAGGCT	330

Supplementary Table 2. Sequence relatedness among the 22 LIM proteins of *Brassica rapa**

	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u	v
BrLIM1 (a)	100																					
BrLIM2 (b)	87	100																				
BrLIM3 (c)	76	77	100																			
BrLIM4 (d)	74	76	95	100																		
BrLIM5 (e)	63	60	58	59	100																	
BrLIM6 (f)	65	65	63	61	96	100																
BrLIM7 (g)	62	62	59	60	97	99	100															
BrLIM8 (h)	63	63	62	63	90	82	91	100														
BrLIM9 (i)	63	62	62	63	86	83	87	97	100													
BrLIM10 (j)	51	51	51	51	57	53	57	58	58	100												
BrLIM11 (k)	49	51	51	51	58	53	58	59	59	98	100											
BrLIM12 (l)	80	80	67	67	60	57	60	60	57	63	63	100										
BrLIM13 (m)	37	37	60	37	33	57	33	37	37	46	43	55	100									
BrLIM14 (n)	29	35	30	26	29	24	29	29	29	32	32	48	48	100								
BrLIM15 (o)	29	29	80	80	56	24	29	29	71	57	57	63	48	93	100							
BrLIM16 (p)	37	39	80	46	37	37	37	40	86	40	40	51	52	62	61	100						
BrLIM17 (q)	43	43	36	36	28	23	24	24	43	29	29	57	43	78	52	53	100					
BrLIM18 (r)	27	25	38	38	27	38	31	33	30	44	44	47	45	49	60	59	85	100				
BrLIM19 (s)	57	75	35	42	75	75	75	50	29	63	63	69	42	39	67	52	40	39	100			
BrLIM20 (t)	74	82	71	71	58	66	58	61	60	48	49	83	46	40	29	39	50	33	38	100		
BrLIM21 (u)	77	80	74	77	60	61	59	61	58	48	49	83	57	25	28	44	43	33	57	82	100	
BrLIM22 (v)	87	88	77	78	62	60	61	63	59	50	51	83	41	25	28	39	43	33	75	83	92	100

*Results from pairwise amino acid sequence comparisons are shown as percent identity among members of the LIM family proteins.