

**Sup File 4.** LRR motifs analysis in the LRR domain of identified potato LRR-RLK members

LRR	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
M02	<u>G</u>	x	I	P/s	x	e	I/l	G	n	L	x	x	<u>L</u>	x	x	L	d	<u>L</u>	S	x	<u>N</u>	n	L/f	T/s
M03	<u>G</u>	x	I	<u>P</u>	x	x	I/L	g	x	L/c	x	x	<u>L</u>	x	x	<u>L</u>	x	L	x	N	<u>N</u>	x	L/f	s/t
M04	<u>G</u>	x	I	<u>P</u>	x	x	i/l	x	n	L	x	x	<u>L</u>	x	x	<u>L</u>	n	<u>L</u>	q/s	n	<u>N</u>	x	L/f	S/t
M06	<u>G</u>	x	I/l	<u>P</u>	x	e	I/i	G	x	l	x	s	<u>L</u>	x	x	<u>L</u>	D	<u>L</u>	S	x	<u>N</u>	x	L/F	T/s
M07	<u>G</u>	x	I	<u>P</u>	x	s	L/f	G	x	L	x	x	<u>L</u>	x	x	<u>L</u>	x	<u>L</u>	s	x	<u>N</u>	x	L	S
M08	<u>G</u>	x	I	<u>P</u>	x	E	I/L	G	x	L	x	x	<u>L</u>	x	x	<u>L</u>	x	<u>L</u>	x	x	<u>N</u>	x	L/f	T
M09	<u>G</u>	x	I	<u>P</u>	x	x	I/l	g	x	L	x	x	<u>L</u>	x	x	<u>L</u>	x	L	x	x	<u>N</u>	x	L/f	S
M10	<u>G</u>	x	I	<u>P</u>	x	s	I	G	n	L	x	x	<u>L</u>	e	x	L	n/d	L	S	x	<u>N</u>	x	L/F	s
M11	<u>G</u>	x	I	<u>P</u>	x	s	L/I	G	n	C	x	S	<u>L</u>	x	x	L	x	<u>L</u>	s	x	<u>N</u>	x	L	S
M12	<u>G</u>	x	I	<u>P</u>	x	e	I/f	G	x	<u>L</u>	x	x	<u>L</u>	x	v	<u>L</u>	d	<u>L</u>	x	x	<u>N</u>	n	L/f	S
M13	<u>G</u>	x	I	<u>P</u>	x	e	I/i	G	k	I/f	x	x	<u>L</u>	x	x	<u>L</u>	d	L	<u>S</u>	x	<u>N</u>	x	L	T
M14	<u>G</u>	x	I/l	<u>P</u>	x	x	i/l	G	x	L	x	x	<u>L</u>	x	x	L	D	L	S	x	<u>N</u>	x	L/F	S/t
M15	<u>G</u>	x	I	<u>P</u>	x	s	L/I	G	x	L	x	x	<u>L</u>	x	x	<u>L</u>	x	L	x	x	<u>N</u>	x	L/F	S
M16	<u>G</u>	x	I/l	<u>P</u>	p	x	L	C	s	g	x	k	<u>L</u>	x	x	L	i	L	x	x	<u>N</u>	x	L/F	t
M23	<u>G</u>	x	I/l	<u>P</u>	x	x	L	g	x	L	x	x	<u>L</u>	x	x	L	x	L	x	x	<u>N</u>	x	L/F	s/t
M24	<u>G</u>	x	I	<u>P</u>	x	x	L	g	x	L	x	x	<u>L</u>	x	x	L	D/n	L	S	x	<u>N</u>	x	L/F	t
M25	<u>G</u>	x	I	<u>P</u>	x	x	I	G	n	l	x	x	L	x	x	L	D	L	S	x	<u>N</u>	x	L/f	s
M26	<u>G</u>	x	I/l	<u>P</u>	x	x	L	g	n	L	t/s	x	L	x	x	L	d	L	s	n	<u>N</u>	n	L/f	S
M27	<u>G</u>	x	I/l	<u>P</u>	x	e	L/i	G	n	l	x	n	L	x	x	<u>L</u>	x	L	x	x	<u>N</u>	x	L/f	s
M28	<u>G</u>	x	I	<u>P</u>	x	x	I/l	G	n	l	x	x	<u>L</u>	x	x	l	d	L	s	x	<u>N</u>	x	L/F	S/t
M29	<u>G</u>	x	I/L	<u>P</u>	x	E	l	G	N	C	x	s	<u>L</u>	x	x	L	d/n	L	S	x	<u>N</u>	x	L/F	s
M30	<u>G</u>	x	I	<u>P</u>	P	e	I/l	g	x	L	x	n	L	x	x	L	x	L	x	x	<u>N</u>	n	F/L	T
M32	<u>G</u>	x	I/l	<u>P</u>	x	x	i/l	x	x	L	s	x	<u>L</u>	x	x	L	D	L	S	x	<u>N</u>	x	L/f	x
M33	<u>G</u>	s	I/L	<u>P/s</u>	x	x	I/i	x	x	L	x	s	<u>L</u>	x	x	L	x	L	x	n	<u>N</u>	x	L/F	S
M34	<u>G</u>	x	I	<u>P</u>	x	e	L/I	g	x	C	x	x	<u>L</u>	x	x	L	d	L	S	x	<u>N</u>	x	L	s
M35	<u>G</u>	x	I	<u>P</u>	x	e	I	G	N	L	x	x	<u>L</u>	x	x	L	x	L	s	x	<u>N</u>	x	L/F	S
M36	<u>G</u>	x	I	<u>P</u>	x	x	I/f	g	n	x	x	x	<u>L</u>	x	x	L/f	D/n	L	S	x	<u>N</u>	x	L/f	S
M37	<u>G</u>	e	i/l	<u>P</u>	x	e	i/l	G	x	L	x	x	<u>L</u>	x	x	L	d	L	x	x	<u>N</u>	x	F/l	S
M38	<u>G</u>	x	I	<u>P</u>	x	e	L/i	G	x	L	x	x	<u>L</u>	x	x	<u>L</u>	d	L	s	x	<u>N</u>	x	L	S/t

Note: The sequence conservation of LRR motif at each position was measured by bits. If the bits value of the amino acid at certain position is less than 0.5, such position would be represented with x;  $1 > \text{bits} \geq 0.5$ , with lowercase;  $2 > \text{bits} \geq 1$ , with capital letter;  $3 > \text{bits} \geq 2$ , with bold capital;  $\text{bits} \geq 3$ , with underlined capital letter in bold.