

Supplemental Table 1. Primers used in this study.

Primers used for cloning into protein expression vectors in yeast

	Forward	Reverse
Cloning into pGADT7		
<i>LjMPK6</i> (Lj4g3v0510090.1)	5'- GGCATCGATACGGGATCCATATGGAAGGAGGAGG AGGTGC-3'	5'- CATCTGCAGCTCGAGCTCCTAATGCTGTTCAAAA TCAAAGCTG-3'
Cloning into pGBKT7		
<i>LjPP2C</i> (Lj2g3v2292680.1)	5'- CCGAATTCCCGGGGATCCGTATGTCTTGCTCCGTC G-3'	5'- GTTATGCGGCCGCTGCAGTTAAATATAGTGCTCC -3'

Primers used for cloning into protein expression vectors in *E.coli*

	Forward	Reverse
Cloning into pMALc2x		
<i>LjPP2C</i> (Lj2g3v2292680.1)	5'-ATTTCAGAATTCGGATCC ATGTCTTGCTCCGTCGCAGT-3'	5'-TGCCAAGCTTGCCTGCAG TTAAATATAGTGCTCCAATTGATG-3'
Cloning into pGEX-6P-1		
<i>LjSIP2</i> (Lj3g3v2040150.1)	5'-CAGGGGCCCTGGGATCC ATGAGGCCGATTCAACTAC-3'	5'-GTCAGTCACGATGCGGCCGC CTATGAAGAAAGAGACCTGG-3'
<i>LjMPK6</i> (Lj4g3v0510090.1)	5'-CAGGGGCCCTGGGATCC ATGTCTTGCTCCGTCG-3'	5'-GTCAGTCACGATGCGGCCGC TTAAATATAGTGCTCCA-3'
Cloning into pET-28a		
<i>LjSIP2</i> (Lj3g3v2040150.1)	5'-TGGTGCTCGAGTGCGGCCGC ATGAGGCCGATTCAACTAC-3'	5'-CAAATGGGTCGCGGATCC CTATGAAGAAAGAGACCTGG-3'
<i>LjMPK6</i> (Lj4g3v0510090.1)	5'-TGGTGCTCGAGTGCGGCCGC CTGCTGATACTCAGGGTTA-3'	5'-CAAATGGGTCGCGGATCC ATGGAAGGAGGAGGAGGT-3'

Primers used for cloning into vectors for protein expression in *N. benthamiana* leaves or *L. japonicus* hairy roots

	Forward	Reverse
Cloning into pUB-GFP-3×FLAG (plus 6×His tag)		
<i>LjPP2C</i> (Lj2g3v2292680.1)	5'-GTCCTTATAGTCGGTACC (GTGGTGGTGGTGGTGGTGGT) AATATAGTGCTCCAATTGATG-3'	5'-ATGTGATTACAGTCTAGA ATGTCTTGCTCCGTCGCA-3'
<i>LjMPK6</i> (Lj4g3v0510090.1)	5'-GTCCTTATAGTCGGTACC (GTGGTGGTGGTGGTGGTGGT) CTGCTGATACTCAGGGTT-3'	5'-ATGTGATTACAGTCTAGA ATGGAAGGAGGAGGAGGT-3'
Cloning into pUB-GFP-3×HA		
<i>LjMPK6</i> (Lj4g3v0510090.1)	5'-ATCGTATGGGTAGGTACC CTGCTGATACTCAGGGTT-3'	5'-ATGTGATTACAGTCTAGA ATGGAAGGAGGAGGAGGT-3'
Cloning into p1300-35S-sGFP-HA		
<i>LjPP2C</i> (Lj2g3v2292680.1)	5'-CGCGCCACTAGTGGATCC ATGTCTTGCTCCGTCG-3'	5'-GCCCTTGCTACCCCGGG AATATAGTGCTCCAATT-3'
Cloning into p1300-35S-mCherry-FLAG		
<i>LjMPK6</i> (Lj4g3v0510090.1)	5'-GGTACCCTCGAGGTCGAC CTGCTGATACTCAGGGTT-3'	5'-GCCTGGCGCGCCACTAGT ATGGAAGGAGGAGGAGGT-3'

Primers used for introducing mutated versions of proteins

	Forward	Reverse
<i>LjPP2C</i> (Lj2g3v2292680.1)		
D169N; D330N	5'-CTCCATGCCCATTAATAACGCCA-3' 5'-CCCATAATCCATTGAAGCTAAT-3'	5'-TGGCGTATTTAATGGGCATGGAG-3' 5'-ATTAGCTTCAAATGGATTATGGG-3'
<i>LjMPK6</i> (Lj4g3v0510090.1)		
T224A Y226F	5'-CTGATTTTATGGCTGAA TTTGTGTCACAAG-3'	5'-CTTGTGACAACAAATTC AGCCATAAAATCAG-3'

Primers used for cloning promoter

<i>LjPP2C</i> promoter	
forward	5'-ACTGACCA <u>CCCCGGG</u> GAGTTGTTGCTTGTCTTGCTC-3'
reverse	5'-ATCTAC <u>AGCGCT</u> GAGATGTTATTGTTGTTGAGTCAA-3'

Primers used for qRT-PCR

	Forward	Reverse
<i>LjATPase</i>	5'-CAATGTCGCAAGGCCCATGGTG-3'	5'-AACACCACTCTCGATCATTCTCTG-3'
<i>LjPP2C</i>	5'-GATTGCCGTGCTGTCATTAG-3'	5'-AATCAACATAGCCACCCAGA-3'