

Supplemental Table S1. Constructs and corresponding primers used in this study

Construct	Vector	Primer sequence (5'-3')
Y2H assay		
BD-P8	pGBKT7	F: ATTCCATGGAGATGACTGGCACCCATGAC R: GCCGGATCCCTTACACAATAATAGATGCAG
BD-SP8	pGBKT7	F: GCTCATATGATGATTGGCACCTATGATGA R: ATTGGATCCCTTAGCAAAGAATAGACACAGC
BD-P5-1	pGBKT7	F: ATTC CCGGG TATGACATATTCGAAAGTG R: TAA GTCGAC GTCACGTTGAAGATGGTTG
BD-P5-2	pGBKT7	F: ATTCCATGGAGATGACAAAATTTCCACTTG R: GAAGGATCCCTCAGAGATGAAGCATGAC
BD-P6	pGBKT7	F: ATTCCATGGAGATGTCTGCCCACCTGACC R: GCCGGATCCCTTACTCAGAGCTTAGTTGCC
BD-P7-1	pGBKT7	F: ATTGGATCCGTATGGATAGACCTGCTCGA R: GCCCTGCAGGTTAAGCAGAAGGAGATGA
BD-P7-2	pGBKT7	F: GATCCATGGAGATGAATTACACTTTAGG R: CTCGGATCCCTTAAGAATTCAGTATCTT
BD-P9-1	pGBKT7	F: ATTCCATGGAGATGGCAGACCAAGAGC R: CCAGGATCCCTCAAACGTCCAATTC
BD-P9-2	pGBKT7	F: ATTCCATGGAGATGAATCCCCAATCTT R: CACGGATCCCTTAATTA AAAA AGCGTATAG
BD-P10	pGBKT7	F: ATTCCATGGAGATGGCTGACATAAGACTC R: GATGGATCCCTCATCTTGTCACTTTGTT
AD-ZmAKIN $\beta\gamma$ -2	pGADT7	F: ATTGAATTCATGTTCTCGCACGGCGCTG R: CACGGATCCCTCACAAGCTCAGCAAGAAC
AD-ZmAKIN $\beta\gamma$ -1	pGADT7	F: ATTGAATTCATGTTCTCGCACGGCGC R: CCTGGATCCCTCACAAGCTCAGCAAGAAC
AD-OsAKIN $\beta\gamma$	pGADT7	F: ATTATCGATACATGTTTCCCACGGCGC R: GCCCTCGAGCTTAGCTCAGCAAGAACTTG
AD-NbAKIN $\beta\gamma$	pGADT7	F: ACGATCGATACATGTTTGGGTCTGGGAG R: ATTGGATCCCGCAGCCGAGCAAGAAC
AD-ZmAKIN $\beta\gamma$ -2(1-153)	pGADT7	F: The same as for AD-ZmAKIN $\beta\gamma$ -2 R: GCAGGATCCCTCACTCTGAAACTCTCAGAGTAC
AD-ZmAKIN $\beta\gamma$ -2(154-496)	pGADT7	F: GCCGAATTCATGGCTGCAATACAAATATCTAG R: ATTGGATCCCTCACAAGCTCAGCAAGAAC
AD-ZmAKIN $\beta\gamma$ -2(1-237)	pGADT7	F: The same as for AD-ZmAKIN $\beta\gamma$ -2 R: ACTGGATCCCGAGCCATGAGTTTCTAG
AD-ZmAKIN $\beta\gamma$ -2(1-333)	pGADT7	F: The same as for AD-ZmAKIN $\beta\gamma$ -2 R: GCTGGATCCCGAGTTGAGTTTTTGAAGTATC
AD-ZmAKIN $\beta\gamma$ -2(1-415)	pGADT7	F: The same as for AD-ZmAKIN $\beta\gamma$ -2 R: GCTGGATCCCTGTGTAGACCTTGTCTTT
BiFC assay		
P8-YFP ^N	pSPYNE-35S	F: CAGACTAGTATGACTGGCACCCATGAC R: GACCTCGAGCACATAATAGATGCAGC

P8-YFP ^C	pSPYCE-35S	F: The same as for P8-YFP ^N R: The same as for P8-YFP ^N
ZmAKINβγ-2-YFP ^C	pSPYCE-35S	F: ATT <u>ACTAGT</u> ATGTTCTCGCACGGCGCTG R: AGA <u>CTCGAG</u> CAAGCTCAGCAAGAACTTG
ZmAKINβγ-2-YFP ^N	pSPYNE-35S	F: The same as for ZmAKINβγ-2-YFP ^C R: The same as for ZmAKINβγ-2-YFP ^C
ZmAKINβγ-1-YFP ^C	pSPYCE-35S	F: The same as for ZmAKINβγ-2-YFP ^C R: The same as for ZmAKINβγ-2-YFP ^C
pUC-P8-YFP ^N	pUC-SPYNE	F: The same as for P8-YFP ^N R: The same as for P8-YFP ^N
pUC-ZmAKINβγ-2-YFP ^C	pUC-SPYCE	F: The same as for ZmAKINβγ-2-YFP ^C R: The same as for ZmAKINβγ-2-YFP ^C
pUC-ZmAKINβγ-1-YFP ^C	pUC-SPYCE	F: The same as for ZmAKINβγ-2-YFP ^C R: The same as for ZmAKINβγ-2-YFP ^C
Subcellular localization		
ZmAKINβγ-1-GFP	pGD-eGFP	F: ATT <u>AGATCT</u> ATGTTCTCGCACGGCGC R: CAAG <u>TCGACCA</u> AGCTCAGCAAGAACTTG
ZmAKINβγ-2-GFP	pGD-eGFP	F: The same as for ZmAKINβγ-1-GFP R: The same as for ZmAKINβγ-1-GFP
GFP-P8	pGD-eGFP	F: ATT <u>CTGCAGT</u> CATGACTGGCACCCATGA R: CGC <u>GGATCCT</u> TACACAATAATAGATGCAG
ZmAKINβγ-1-RFP	pGD-RFP	F: The same as for ZmAKINβγ-1-GFP R: The same as for ZmAKINβγ-1-GFP
ZmAKINβγ-2-RFP	pGD-RFP	F: The same as for ZmAKINβγ-1-GFP R: The same as for ZmAKINβγ-1-GFP
BMV VIGS		
BMV- <i>ZmAKINβγs</i>	pC13/F3	F: ATTC <u>CCTAGGA</u> ACAGTCGTCCATTGGC R: ACT <u>CCATGGC</u> GAACATGTGTGTAGAC

The single-underlined letters indicate the enzymatic restriction sites