Table S1. PCR Primer sets used in the current study.

Clone	Primer pair	
CmRBP50-S206A	Forward	5’-GAACCAAAAGGCCGGCCAGCTCAACAGCCTG-3’
	Reverse	5’-TGGCCGGCCTTTTGGTTCAGATGGCAGG-3’
CmRBP50-S223A	Forward	5’-GCATGTATGCACTTCAAGCAGCTGGAGCAGGA-3’
	Reverse	5’-TGCTTGAAGTGCATACATGCCTCCCGCATC-3’
CmRBP50-S429A	Forward	5’-GTTTGCAAGCACGCTAGTGCTCTTAGTGGGT-3’
	Reverse	5’-ACTAGCGTGCTTGCAAACAAGAGCTTCA-3’
CmRBP50-TM	Forward	5’-GT-GGGTCGATCATTCGCATTGCTTTTGCTCAGCTGC-AGGCTATAGGTACC-3’
	Reverse	5’-AATGCGAATGATCGACCCACTAAGCGAACT-3’
CmGTPbP	Forward	5’-ATGGCTTTGCCGAATCAGCAGACT-3’
	Reverse	5’-TTACTCGAAAGCATCGTCGTCGTC-3’
CmCPI	Forward	5’-ATGGCGCTTCTTGGAGGTATC-3’
	Reverse	5’-CTAAGCAGAGGAGCCCACAGA-3’
CmPSPL	Forward	5’-ATGTCTAAGCAGACCTACAGAGTG-3’
	Reverse	5’-TTAAACAAATTCAAACCCCATCAG-3’
CmEP89	Forward	5’-ATGGCCACGGTTGATGATTCGAGTAGCG-3’
	Reverse	5’-TCACCTCAACTGAGTTGCAGGGCT-3’
CmHSP	Forward	5’-ATGCGATCAGGAACTTGCGCAGCT-3’
	Reverse	5’-TTAGTTTTCGAATTCCCATTCTGC-3’
CmPP16	Forward	5’-CACCATGGGGATGGGAATGATGGAG-3’
	Reverse	5’-TTAGTGATGGTGATGGTGGTGGTTTTCCCATGGGTAA-CATCC-3’
CmGTPbP	Forward	5’-CACCATGGCTTTGCCGAATCAGCAGACT-3’
	Reverse	5’-TTAGTGATGGTGATGGTGGTGCTCGAAAGCATCGTCG-TCGTC-3’
CmCPI	Forward	5’-CACCATGGCGCTTCTTGGAGGTATC-3’
	Reverse	5’-CTAGTGATGGTGATGGTGGTGAGCAGAGGAGCCCACAGA-3’
Cm-PSPL	Forward	5’-CACCATGTCTAAGCAGACCTACAGAGTG-3’
	Reverse	5’-TTAGTGATGGTGATGGTGGTGAACAAATTCAAACCCCA-TCAG-3’
CmEP8-9	Forward	5’-CACCATGGCCACGGTTGATGATTCGAGTAGCG-3’
	Reverse	5’-TCAGTGATGGTGATGGTGGTGCCTCAACTGAGTTGCAGG-GCT-3’
CmHSP	Forward	5’-CACCATGCGATCAGGAACTTGCGCAGCT-3’
	Reverse	5’-TTAGTGATGGTGATGGTGGTGGTTTTCGAA-TTCCCATT-CTGC-3’
GST	Forward	5’-CACCATGTCCCCTATACTAGGTTATTGG-3’
	Reverse	5’-CACCATGTCCCCTATACTAGGTTATTGG-3’

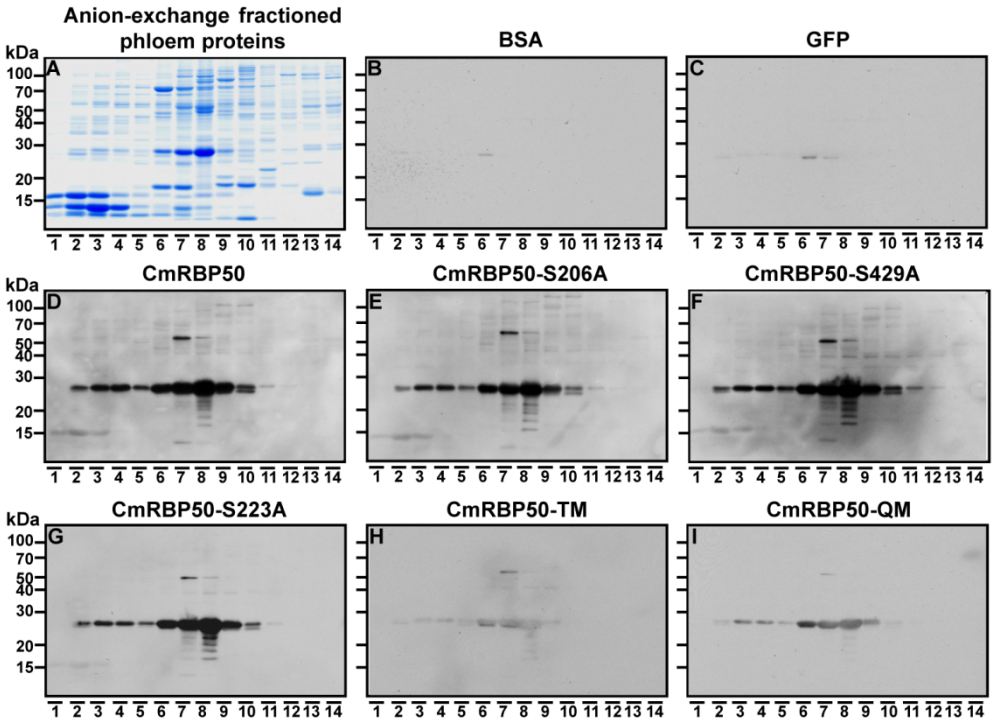

FIGURE S1. **Protein overlay assays establish that C-terminal phosphorylation of CmRBP50 is necessary for interaction with pumpkin phloem proteins.** (*A*) FPLC-fractionated proteins from pumpkin phloem exudate. Proteins were separated on a 13% SDS-PAGE gel and then stained with GelCode Blue reagent. FPLC-fractionated phloem proteins were blotted onto nitrocellulose membrane and then overlaid with the following in-planta expressed and purified proteins carrying a $(c\text{-Myc})_4\text{-His}_6$ tag: BSA (*B*), GFP (*C*), CmRBP50 (*D*), CmRBP50-S206A (*E*), CmRBP50-S429A (*F*), CmRBP50-S223A (*G*), CmRBP50-TM (*H*), or CmRBP50-QM (*I*). Interaction was detected using anti-c-Myc monoclonal antibody.

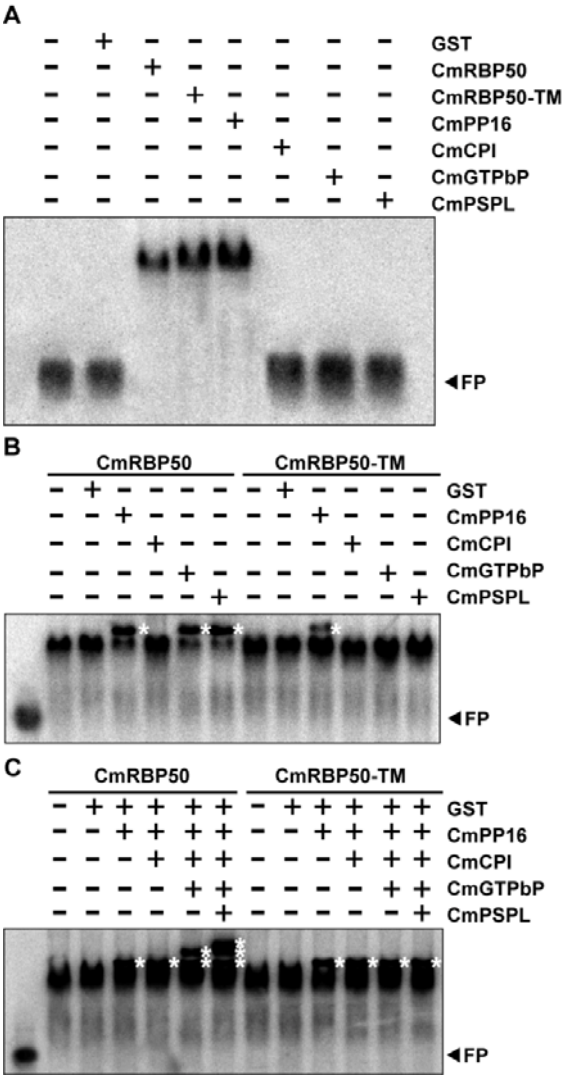

FIGURE S2. **CmRBP50 Binding to *CmGAIP* mRNA is enhanced in the presence of components of the phloem RNP complex.** (*A*) Gel mobility-shift assays performed using recombinant purified CmRBP50, CmRBP50-TM, CmPP16, CmCPI, CmGTPbP, or CmPSPL and a 2.2 kb ^{32}P-labeled full-length *CmGAIP* RNA riboprobe (10 nM) that contains PTB motifs. Note that, of the protein components in a CmRBP50 RNP complex, only CmRBP50 and CmPP16 exhibit RNA binding capacity. (*B*) Effect of individual CmRBP50 interacting proteins on CmRBP50 RNA-binding capacity. Recombinant purified CmRBP50 or CmRBP50-TM was mixed with GST, CmPP16, CmCPI, CmGTPbP, or CmPSPL, respectively, for gel mobility-shift assays. Asterisks indicate additional bands formed in the presence of CmRBP50/CmRBP50-TM and the indicated protein. (*C*) Combinatorial effect of CmRBP50 interacting proteins on the capacity of CmRBP50 to form complexes with *CmGAIP* RNA. The RNA-CmRBP50 complexes were assembled as indicated at the top of the panel. Asterisks indicate additional bands formed in the presence of CmRBP50/CmRBP50-TM and the indicated proteins. FP indicates free probe.