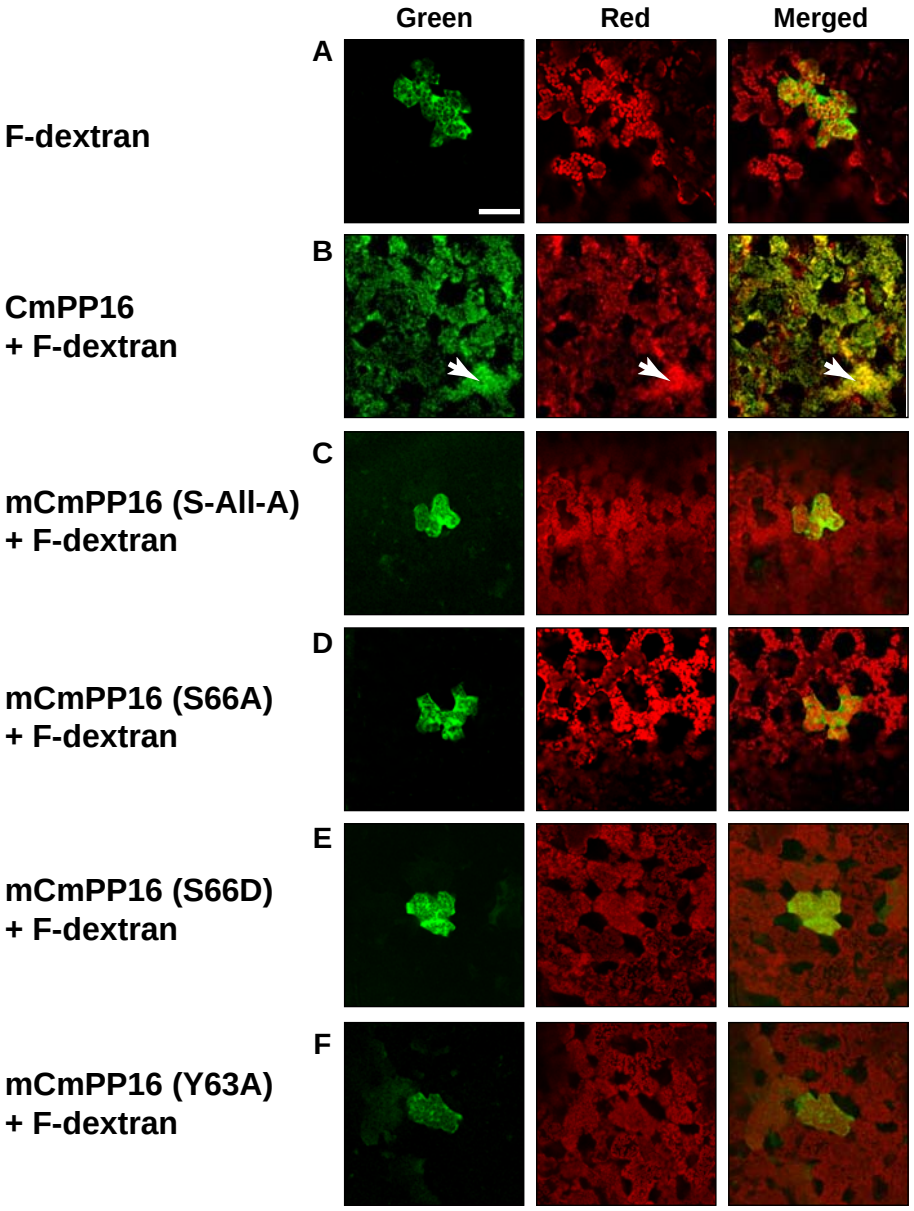
Supplemental Figure 1



Supplemental Figure 1. Post-translational Modifications on CmPP16-1 Are Required for Cell-to-Cell Trafficking Through Mesophyll Plasmodesmata.

(A) Microinjection of FITC-labeled 10 kDa dextran (F-dextran). In this control experiment, fluorescent signal is retained in the injected cell.

(B) Recombinant His-tagged CmPP16-1 co-injected with 10 kDa FITC-labeled dextran. Note the extensive cell-to-cell movement of the 10 kDa FITC dextran that traces the trafficking of CmPP16-1. Arrow identifies the injected cell.

(C) – (F) Co-injection of 10 kDa FITC-labeled dextran along with His-tagged mCmPP16-1 (S-All-A), mCmPP16-1 (S66A), mCmPP16-1 (S66D) and mCmPP16-1 (Y63A), respectively; note that these mutant proteins are compromised in their capacity to increase plasmodesmal size exclusion limit and mediate their own cell-to-cell movement.

Injections were made into Nicotiana benthamiana mesophyll cells and images were collected by confocal microscopy 2 min after the microinjection was carried out. Scale bar in A is 50 µm and is common to all images. Green, fluorescent signal collected in the FITC channel; red, autofluorescent signal from chlorophyll; merged, stacking of green and red signals.