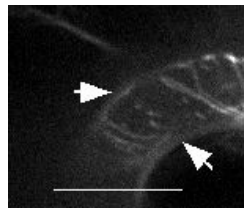
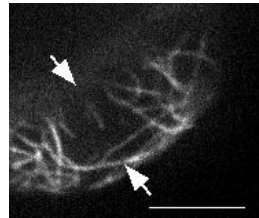


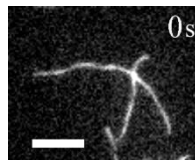
Supplemental Movie Legends. Brief Description of Supplemental Movies 1-5



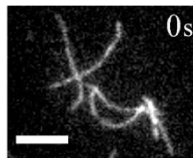
Supplemental Movie 1: Time-series movie displaying the severing events of single filament in Col-0 guard cell. Still images for this cell are shown in Figure 4A. Images were acquired every 2 s and were compressed into a 4 s movie with a play rate of 7 frames per second. The actin filament that underwent severing was marked with white arrows. Scale bar = 5 μm .



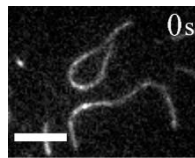
Supplemental Movie 2: Time-series movie displaying the severing events of single filaments in *ckl2* mutant guard cell. Still images for this cell are shown in Figure 4A. Images were acquired every 2 s and were compressed into a 3 s movie with a play rate of 4 frames per second. The actin filament that underwent severing was marked with white arrows. Scale bar = 5 μm .



Supplemental Movie 3: Time-series movie of actin filament severing in the absence of ADF4. Same time series are shown in Figure 6Ba. Images were taken every 3 s for 5 min and were compressed into 9 s movie. Scale bar = 5 μm .



Supplemental Movie 4: Time-series movie of actin filament severing in the presence of 500 nM non-phosphorylated ADF4. Same time series are shown in Figure 6Bb. Images were taken every 3 s for 5 min and were compressed into 9 s movie. Red scissor indicates severing event. Scale bar = 5 μ m.



Supplemental Movie 5: Time-series movie of actin filament severing in the presence of 500 nM CKL2-phosphorylated ADF4. Same time series are shown in Figure 6Fc. Images were taken every 3 s for 5 min and were compressed into 9 s movie. Red scissor indicates severing event. Scale bar = 5 μ m.