

## **Supplemental Movie Legends**

**Supplemental Movie 1.** Dynamics of EB1b-Citrine Comets in the Apical Region of the Caulonemal Apical Cell.

EB1b-Citrine (green) was imaged every 1 s. The images are maximum Z-projections of 3 planes (0.7  $\mu\text{m}$ -intervals). Tip of the cell is on the right. Scale bar = 20  $\mu\text{m}$ .

**Supplemental Movie 2.** Dynamics of sGFP- $\alpha$ -tubulin in the Apical Dome in the control line.

The images were acquired every 3 min. Ten focal planes at 0.8- $\mu\text{m}$  interval Z steps were recorded at each time point, and the maximal intensity projection images of GFP- $\alpha$ -tubulin (grey) are displayed. The tip of the cell is on the right side. Scale bar = 2  $\mu\text{m}$ .

**Supplemental Movie 3.** Dynamics of TagRFP- $\alpha$ -tubulin and EB1b-Citrine in the Apical Dome.

The images were acquired every 3 s. Four focal planes at 0.8- $\mu\text{m}$  interval Z steps were recorded at each time point, and the maximal intensity projection images of TagRFP (red) and Citrine (green) are displayed. The tip of the cell is on the right hand side.

**Supplemental Movie 4.** Dynamics of KINID1a-sGFP and TagRFP- $\alpha$ -tubulin in the Apical Dome.

The images were acquired every 3 s and representative images are shown. Four focal planes at 0.7- $\mu$ m interval Z steps were recorded at each time point, and the maximal intensity projection images of sGFP fluorescence (green) and TagRFP fluorescence (magenta) are displayed. Scale bar = 2  $\mu$ m.

**Supplemental Movie 5.** Dynamics of KINID1a-Cerulean and EB1b-Citrine in the Apical Dome.

The images were acquired every 3 s and representative images are shown. Four focal planes at 0.7- $\mu$ m interval Z steps were recorded at each time point, and the maximal intensity projection images of Cerulean fluorescence (cyan) and Citrine fluorescence (yellow) are displayed. Scale bar = 2  $\mu$ m.

**Supplemental Movie 6.** Dynamics of sGFP- $\alpha$ -tubulin in the Apical Dome of the *KINIDI*-double deletion mutant.

The images were acquired every 3 min. Ten focal planes at 0.8- $\mu$ m interval Z steps were recorded at each time point, and the maximal intensity projection images of GFP- $\alpha$ -tubulin (grey) are displayed. The tip of the cell is on the right hand side. Scale bar = 2  $\mu$ m.