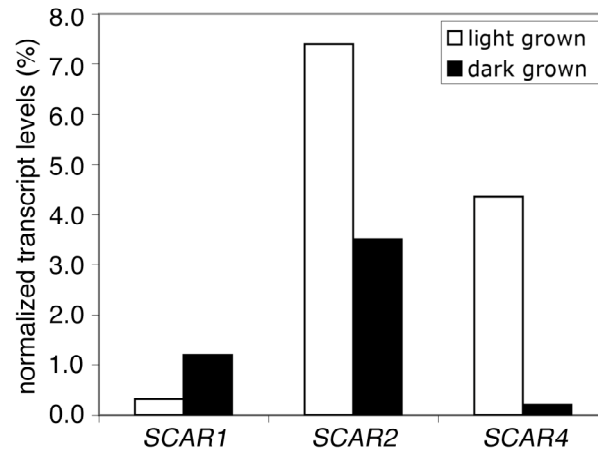Supplemental Data. Zhang et al. (2008). *Arabidopsis SCAR*s function interchangeably to meet actinrelated protein (ARP)2/3-activation thresholds during morphogenesis.

Supplemental Figure 1. *SCAR* gene expression in light-grown and dark-grown hypocotyls

Microarray data from hypocotyls of 7 day-old light-grown seedlings and hypocotyls and cotyledons from 4 day-old dark-grown seedlings were obtained from AtGenExpress (Schmid et al., 2005), and a DNA microarray study by Thomas Kretsch and colleagues (http://www.uni-tuebingen.de/plantphys/AFGN/atgenex.htm). The entire microarray data sets were quantile-normalized using gcRMA. Linearized gcRMA values of *SCAR* genes were normalized to *GAPC* gene in each data set. Compared with the expression levels in 7 days light-grown hypocotyls, *SCAR1* gene expression level in 4 day dark-grown hypocotyls and cotyledons increases by a factor of 3. However, *SCAR2* gene expression decreases by a factor of 2 and *SCAR4* gene decreases by 95%. The *SCAR3* gene is not present on the microarray.
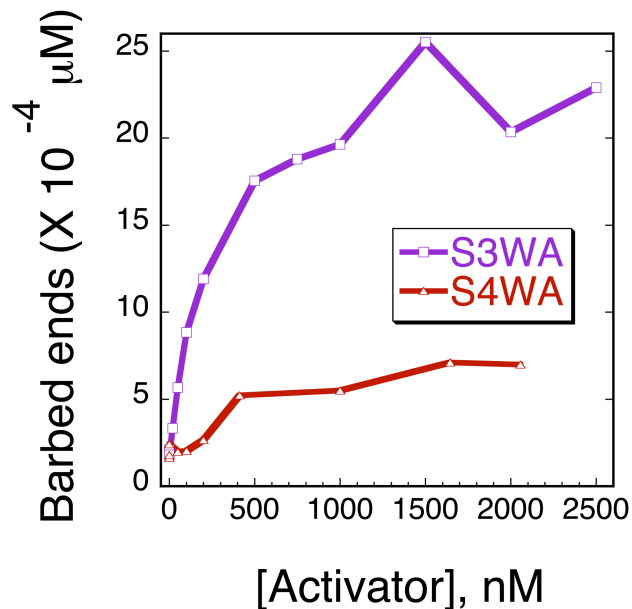
Supplemental Figure 2. ARP2/3 activation efficiency of SCAR3 and SCAR4 WA

domains up to saturating generated barbed end concentrations

Analysis of actin polymerization in the presence of ARP2/3 was monitored with the

indicated GST-tagged activator protein, 3 µM actin (5% pyrene-labeled), and 10 nM

bovine ARP2/3 complex. Shown is the comparison of concentrations of barbed ends

generated at half-maximal polymerization in the presence of varying amounts of GST-

SCAR3-WA and GST-SCAR4-WA.

Supplemental data reference:

Schmid, M., Davison, T.S., Henz, S.R., Pape, U.J., Demar, M., Vingron, M., Scholkopf, B., Weigel, D., and Lohmann, J.U. (2005). A gene expression map of *Arabidopsis thaliana* development. Nat. Genet. **37,** 501-506.