**Supplemental Table S1.** Frequency Distribution for the Ratios of Membrane-Associated CLC1 at the Both Sides of Roots.

Frequency Distribution for the Ratios of Membrane-Associated CLC1 (%)						
Ratio <sup>a</sup>	Vertically grown roots <sup>b</sup>		Gravistimulated roots <sup>b</sup>			
	PM	Intracellular	PM	Intracellular		
< 0.8	0 (0/37)°	0 (0/37)	48.8 (21/43)	53.5 (23/43)		
0.8-1.2	94.6 (35/37)	94.6 (35/37)	37.2 (16/43)	37.2 (16/43)		
> 1.2	5.4 (2/37)	5.4 (2/37)	14 (6/43)	9.3 (4/43)		

<sup>&</sup>lt;sup>a</sup>The ratios of PM- and intracellular compartments-associated CLC1 signal intensities at the right/left or the bottom/top sides of the root epidermis were artificially classified into three types of the levels: (1) the ratios of < 0.8 indicate reduced signal intensity at the right or bottom side; (2) the ratios of 0.8-1.2 indicate similar signal distribution at the both sides; (3) the ratios of > 1.2 indicate increased signal intensity at the right or bottom side.

<sup>&</sup>lt;sup>b</sup>The vertically grown seedlings were treated for 2 h with or without gravistimulation.

<sup>&</sup>lt;sup>c</sup>The fractional number in the brackets denotes that the number of roots with one of three types of the ratios was divided by the total number of examined roots, whereas the number before the brackets is a percentage (%).

**Supplemental Table S2.** Summary of Effects of Loss of AP2 $\mu$  or AP2 $\sigma$  on the PM Association of Other AP-2 Subunits.

ap-2 mutants	Reduction (%) in PM-associated levels of the AP-2 subunits				
	AP2α1-GFP	ΑΡ1/2β1	AP2µ-YFP /AP2µ	AP2σ-GFP /AP2σ	
ар2µ	56% (44.3±14.2***)	49% (51.0±23.9***)	ND	57% (42.5±19.5***) /41% (59.4±31.7***)	
ар2σ	37% (63.1±17.0***)	27% (73.4±34.8***)	32% (67.9±13.0***) /37% (63.4±31.7***)	ND	

Summary of quantitative data from Fig. 5 and Supplemental Fig. S12. Reduction levels were calculated as 100% - % of the wild type. Data (% of the wild type  $\pm$  SD) in brackets present the PM-associated levels of the AP-2 subunits in  $ap2\mu$  or  $ap2\sigma$ . Student's t test (\*\*\*P < 0.0001). ND, not determined. Numbers of roots and cells examined are indicated in the figure legends.

## **Supplemental Table S3.** PCR Primer Sequences for qRT-PCR and Genotyping.

Genes/mutants	Primers	Sequences			
AP2a1	qAP2α1-F	ACGGATCCCAGCAACCTTAA			
	qAP2α1-R	TGCCATTTCCGGAAGAGCTA			
ΑΡ1/2β1	qAP1/2β1-F	CCGGTTGATAGTGCAGCTTC			
	<i>qAP1/2β1-</i> R	CTTGAAGCTGGGACGACAAC			
AP2μ	qAP2μ-F	AATTCCAGTGCCAAAACAAACA			
	qAP2μ-R	GCGCGACCAGTTGTCACTT			
ΑΡ2σ	qAP2σ-F	TCCGAGAAACACAAAGTCGA			
	qAP2σ-R	GTCGGTTATATCCACGCACAC			
UBIQUITIN 7	qUBI7-F	CTTCGTCAAAACCCTCACCGGCAAAA			
	<i>qUBI7</i> -R	GAGAAGACCACCCCTAAGAGCAAGA			
TPLATE	qTPLATE-F	CAGGCAGCAGTGCTCCAAG			
	qTPLATE-R	CGAAGAAACCACACACAAAAAG			
TML	qTML-F	TCGGGATCATGTCGTGTTTA			
	qTML-R	AGCAAAATGTCGGATCCATT			
ACTIN 2	qACTIN2-F	TTGACTACGAGCAGGAGATGG			
	qACTIN2-R	AC ACGAGGGCTGGAACAAG			
ap-2 mutants					
<i>ар2µ</i> (SALK_083693C)	ар2µ -F	AGCTTCTCCTTTTCTTCACCG			
	ар2µ -R	TTCATTAAAACCTTCCCCGTC			
ap2σ (SALK_141555)	ар2σ-F	GATATTGGACCATTTCTTCAGC			
	ap2σ-R	TTATCAGTGGAGGACAAAGAAGG			
SALK_LBb1		GCGTGGACCGCTTGCTGCAACT			

## **Supplemental Table S4.** Information for the AP-2 Antibodies.

Name of antibodies (anti-rabbit)	Peptide location	Sequences	
ΑΡ1/2β1	768-779	CFQNMSAGPPSSL	
AP2µ	260-274	TRFNSEKTVSFVPPDC	
ΑΡ2σ	131-142	CIIERMSELEKLQ	