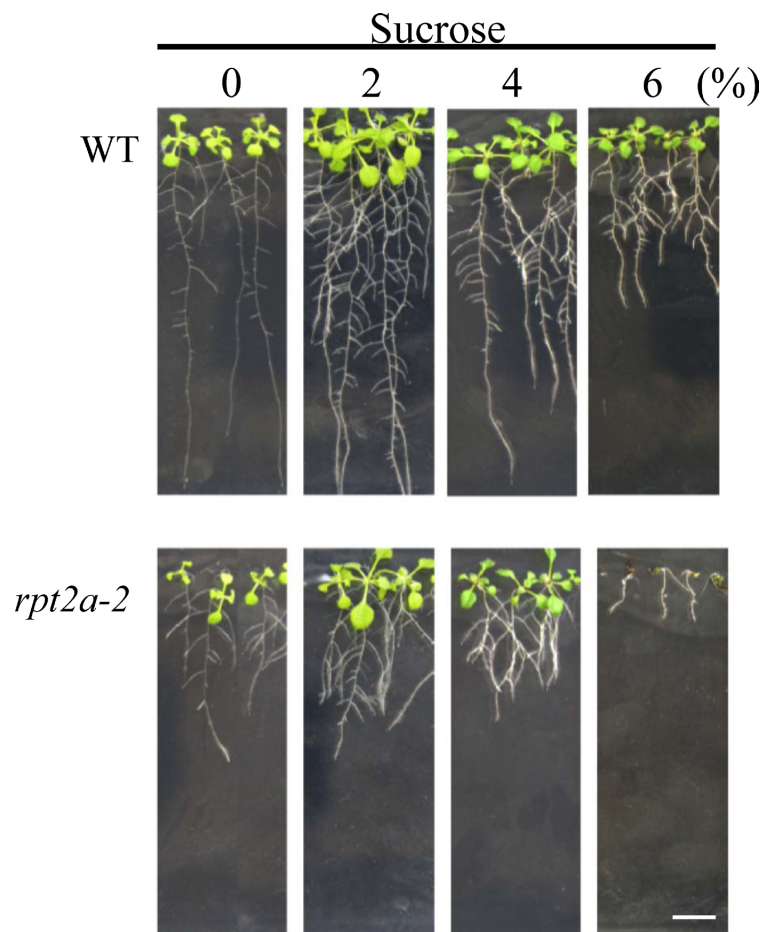
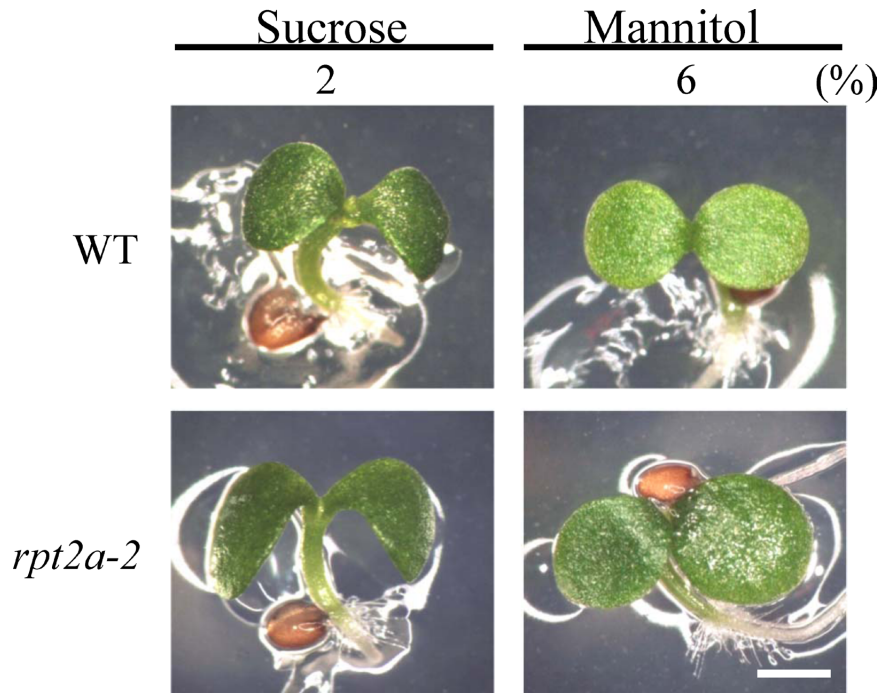


Supplemental Figure S1. Morphological observation of the wild type (WT), and in *rpt2a-2* and *rpt2b-1* response to glucose conditions. Seeds were sown on 1/2 MS medium containing 2%, 4% or 6% glucose, and were checked 7 DAS (days after sowing). Scale bar: 1 mm.



Supplemental Figure S2. Root elongation assay in the wild type and *rpt2a-2*. The wild type (WT) and *rpt2a-2* were plated on 1/2 MS medium containing 2, 4 or 6% sucrose, and samples were checked after 14 days. Scale bar: 1 cm.



Supplemental Figure S3. Osmotic pressure effects check. The wild type (WT) and *rpt2a-2* were sown on 1/2 MS medium containing 2% sucrose and 6% mannitol. Seven DAS plants were used to detect development status. Scale bar: 1 mm.

Supplemental Table S1. Primer pairs for RT-PCR analysis.

| Gene | Primers |
|-------------------------------|---|
| <i>AtRPT1a</i> | 5'-3' Forward: GTGAAGGAGCTAGGATGGTT |
| | 5'-3' Reverse: CGAGTTACTGGAATAAGTTGTG |
| <i>AtRPT1b</i> | 5'-3' Forward: GTGAAGGAGCTAGGATGGTT |
| | 5'-3' Reverse: GAGTTGCTGAGTTTTGCATCA |
| <i>AtRPT2a</i> | 5'-3' Forward: GGAACTTCTGAACCAGCTTG |
| | 5'-3' Reverse: ATTGTTTTACCGGAGGAGAT |
| <i>AtRPT2b</i> | 5'-3' Forward: GAGATTGATGCTGTTGGCAC |
| | 5'-3' Reverse: TAAGCAGAGAGTGAAAACAG |
| <i>AtRPT4a</i> | 5'-3' Forward: GGAACTAGTGCTGATCGTGA |
| | 5'-3' Reverse: ACGTAGTAACTAAGCACACAC |
| <i>AtRPT4b</i> | 5'-3' Forward: GGAACTAGTGCTGATCGTGA |
| | 5'-3' Reverse: TAGGCCCTCTTCTTCTCT |
| <i>AtRPT5a</i> | 5'-3' Forward: AAGTCAGCGGAGACAGGGAA |
| | 5'-3' Reverse: TAGATGATCCTGATTCGAAAAC |
| <i>AtRPT6a</i> | 5'-3' Forward: AAATGGTGACAGTGAGGTGC |
| | 5'-3' Reverse: GAGTTTTGGGAATTCCTTCC |
| <i>AtRPT6b</i> | 5'-3' Forward: AAATGGTGACAGTGAGGTGC |
| | 5'-3' Reverse: AAAGCTTAAAGCGCTAGCCG |
| <i>EF1α</i> | 5'-3' Forward: TCATACCAGTCTCAACACGTCC |
| | 5'-3' Reverse: GCTGTCCTTATCATTGACTCCACC |