

**Fig. S3** Phloem width identification of *PagAS1a* transgenic plants and WT. (a) Cross sectional images of the 13<sup>th</sup> stem internodes from WT, *PagAS1a*-OE and *PagAS1a*-SRDX plants stained with 0.1% phloroglucinol solution. (b) Phloem width of WT, *PagAS1a*-OE (OE11, OE24) and *PagAS1a*-SRDX (DR24, DR28) plants. Error bars represent SD. Scale bars: 50 μm.