



**Fig. S1** Different-expressed genes involved in starch biosynthesis by RNAseq in leaves.

(A) Genes involved in (a) sucrose biosynthesis, (b) starch biosynthesis, (c) protein biosynthesis, (d) sucrose transports, (e) transcriptional factors for starch biosynthesis.

*Abbreviations:* FBA, Fructose-1,6-bisphosphate aldolase; FBP, Fructose 1,6-bisphosphate; PGI, Phosphoglucose isomerase; PGM, Phosphoglucomutase; SPS, Sucrose-phosphate-synthase; SPP, Sucrose phosphate phosphatase; NIN3, Alkaline/neutral invertase; FrK, Fructokinase; HxK, Hexokinase; A/N-inv, alkaline/neutral invertase; SUS, Sucrose synthase; AGPL, ADP-glucose pyrophosphorylase large subunit; AGPS, ADP-glucose pyrophosphorylase small subunit; UGP, UDP-glucose pyrophosphorylase; SSI, II, III, IV, V, Soluble starch synthase I, II, III, IV, V; GBSSI, II, Granule bound starch synthase I, II; BE I, II, III, Starch branching enzyme I, II, III; PUL, pullulanase; ISA1, 2, 3, Isoamylase 1, 2, 3; FLO, Floury; DPE1, 2, Disproportionating enzyme; Pho1, 2, Plastidial starch phosphorylase 1, 2; AlaAT1, 4, Alanine aminotransferase 1, 4; PDI, Protein disulfate isomerase; PPDK, Pyruvate orthophosphate dikinase; Amy3A, 3B, 3C,  $\alpha$ -amylase 3A, 3B, 3C; GluA1, GluA2, GluA3, glutelins A1, A2, A3; CysR10, prolamin; SUT, Sucrose transporter; BT, Brittle1; bZIP58, Basic leucine zipper transcription factor 58; RSR1, Rice starch regulator 1.