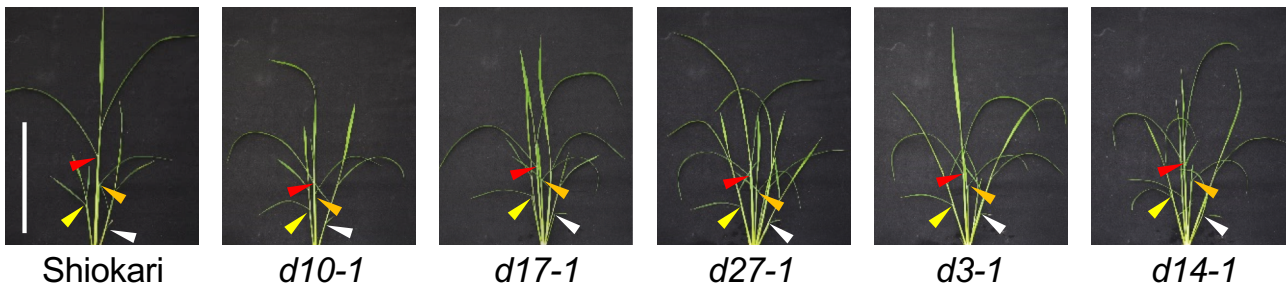
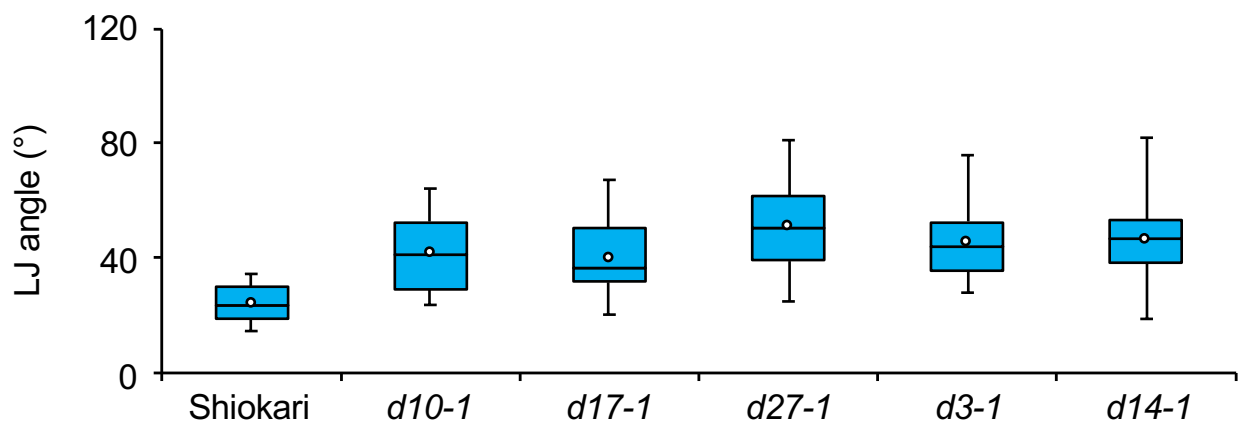


**Fig. S1**

**A**

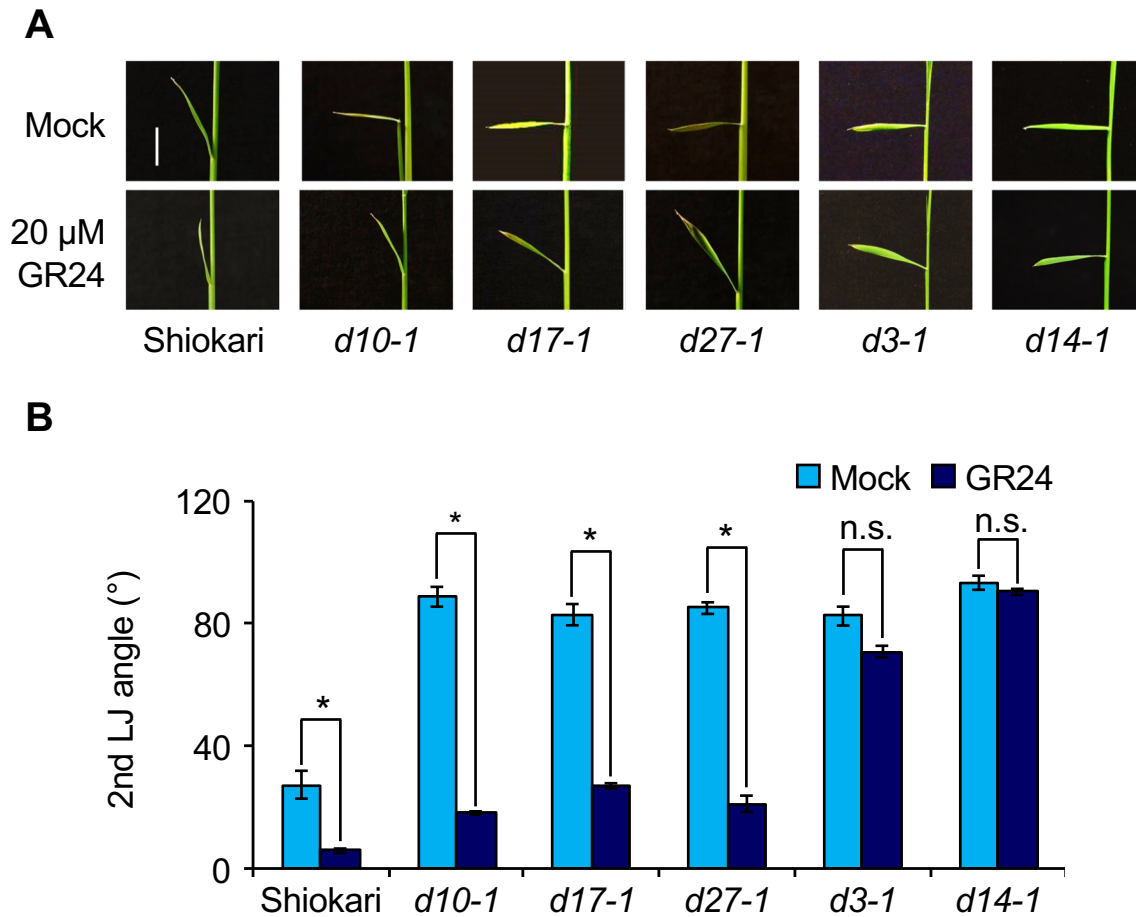


**B**



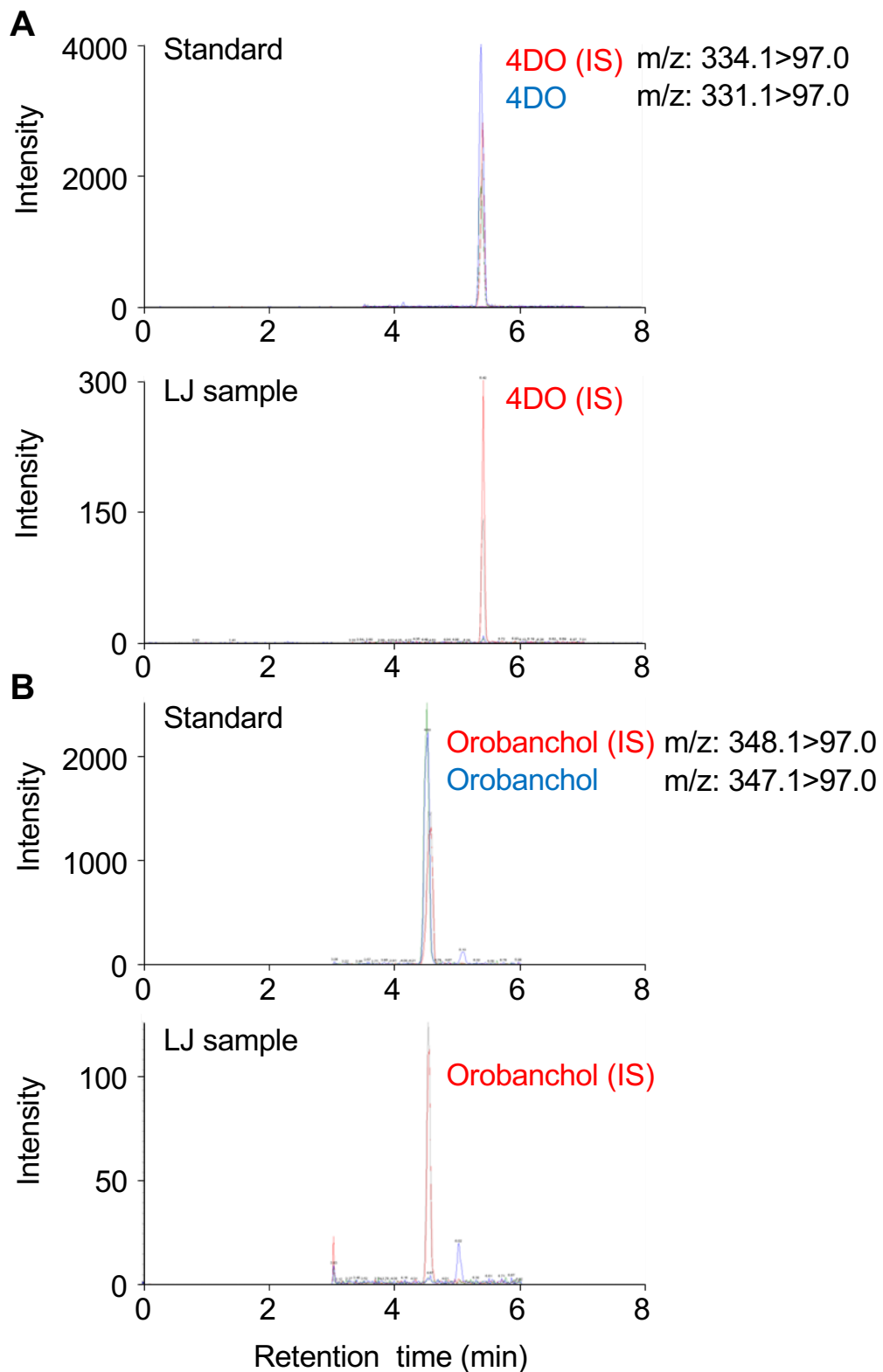
**FIGURE S1** | LJ angle of 'Shiokari'-background rice seedlings grown in soil. **(A)** Images of the 2nd, 3rd, and 4th leaves of 40-day-old plants. Arrowheads: white, 2nd LJ; yellow, 3rd LJ; orange, 4th LJ. Bar, 10 cm. **(B)** LJ angles measured with ImageJ. White circles indicate average ( $n = 24$ ).

Fig. S2



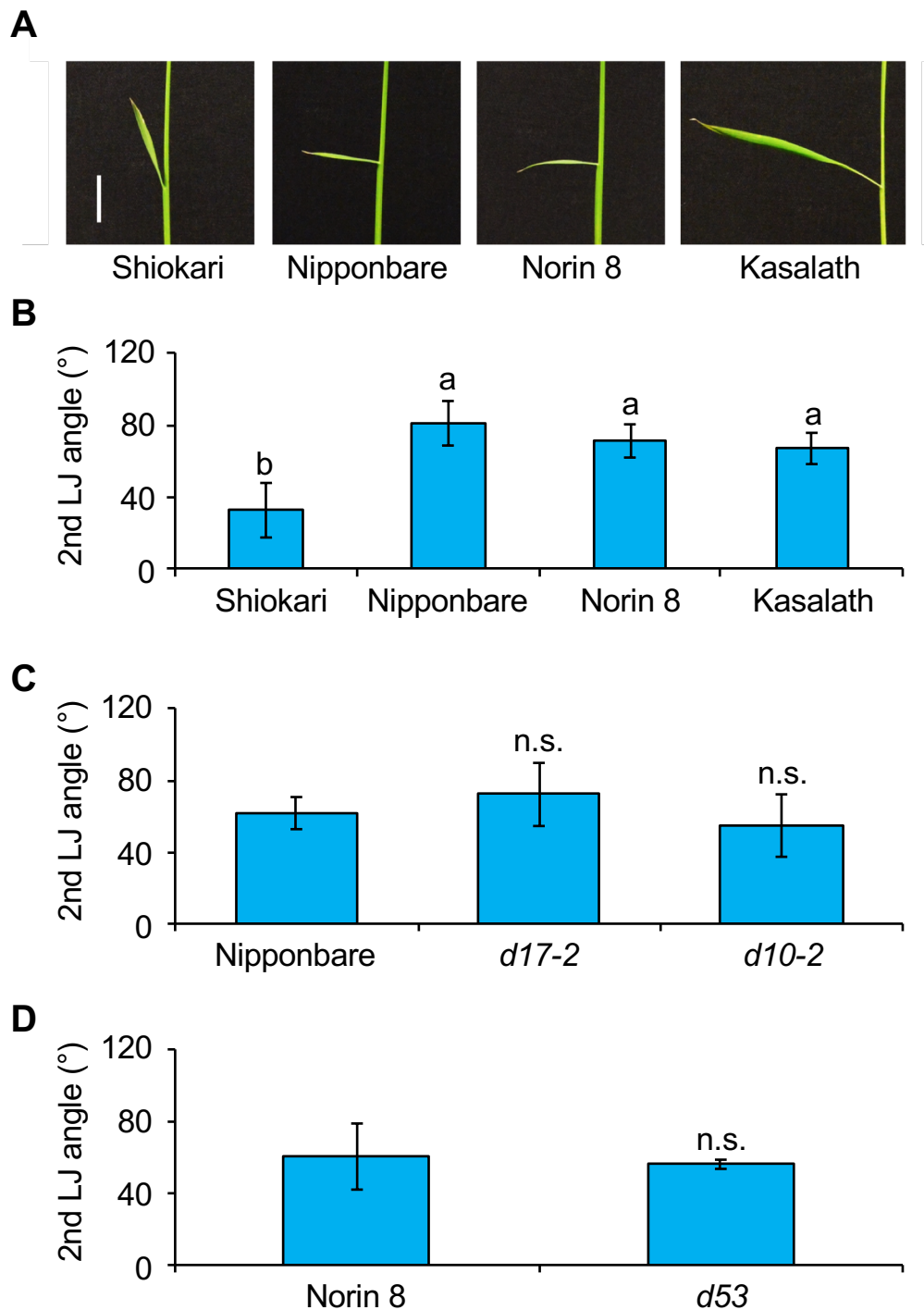
**FIGURE S2** | Effect of exogenously applied GR24 on LJ angle in ‘Shiokari’-background rice seedlings. **(A)** Images of the 2nd leaves of 12-day-old seedlings treated or not with 20  $\mu$ M GR24. Bar, 1 cm. **(B)** Second-LJ angle of seedlings treated or not with GR24. \* $P < 0.05$  (Student’s  $t$ -test). n.s., not significant. Data are means  $\pm$  S.E. ( $n = 5$ , eight seedlings per experiment).

**Fig. S3**



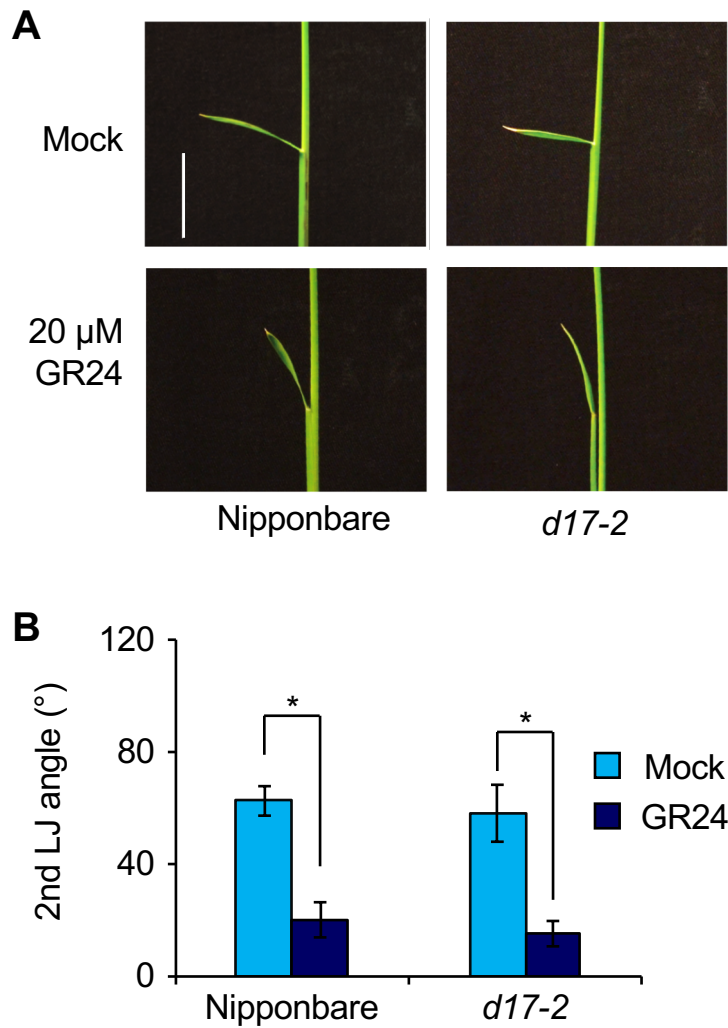
**FIGURE S3** | Chromatograms of canonical SLs in LC-MS/MS analysis. Blue peaks, authentic standard; red peaks, internal standard (IS). **(A)** 4DO; **(B)** orobanchol. Endogenous 4DO and orobanchol were not detected in LJ samples of 8-day-old seedlings grown under -P.

**Fig. S4**



**FIGURE S4** | Differences in LJ angle between rice cultivars. **(A)** Images of the 2nd leaves of 12-day-old seedlings. Bar, 1 cm. **(B)** Second-LJ angle measured with ImageJ. Different letters indicate significant differences in Tukey's HSD ( $P < 0.05$ ). **(C, D)** Second-LJ angle in 12-day-old wild-type and SL-mutant seedlings with the 'Nipponbare' **(C)** and 'Norin 8' **(D)** background. n.s., not significant (Student's  $t$ -test vs. control). All data are means  $\pm$  S.D. ( $n = 8$ ).

Fig. S5



**FIGURE S5** | Effect of exogenously applied GR24 on LJ angle in ‘Nipponbare’-background rice seedlings. **(A)** Images of the 2nd leaves of 12-day-old seedlings treated or not with 20  $\mu$ M GR24. Bar, 1 cm. **(B)** Second-LJ angle of seedlings treated or not with GR24.  $*P < 0.05$  (Student’s *t*-test). Data are means  $\pm$  S.E. ( $n = 5$ ; eight seedlings per experiment).