Supporting Information

Ma *et al*. 10.1073/pnas.0802361105

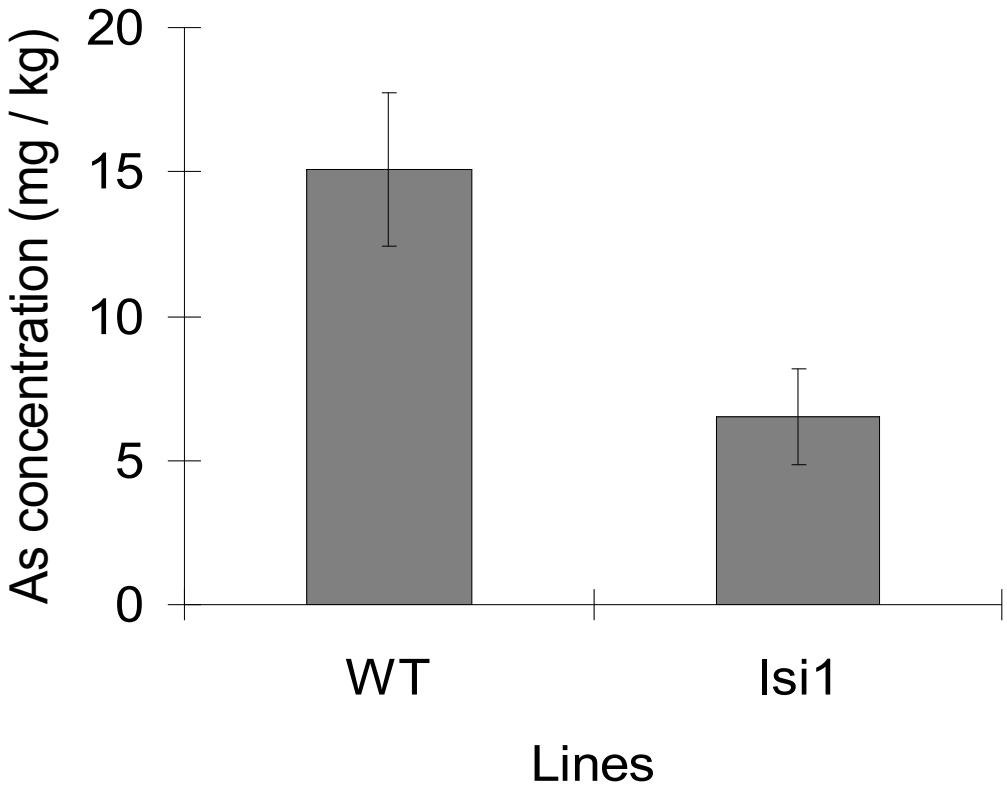

Fig. S1. Short-term As uptake by the wild-type rice (cv. Oochikara) and *lsi1* mutant. Roots of 15-day-old seedlings were exposed to 5 μM As(III). After 30 min, the roots were desorbed with ice-cold 1 mM KH_2PO_4, 0.5 mM $Ca(NO_3)_2$, and 5 mM MES (pH 5.6) for 10 min. The As concentrations in the roots were determined by ICP-MS. Data are means $\pm$ SD ($n = 4$).

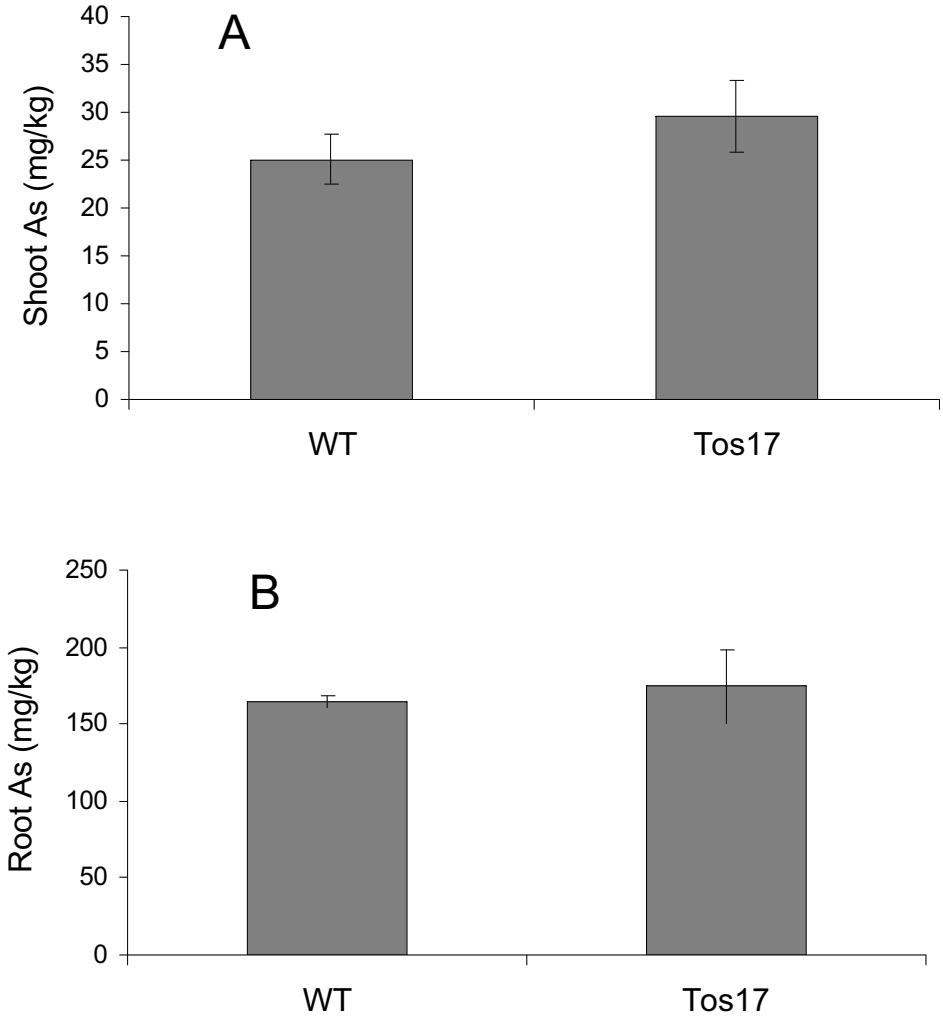

Fig. S2. Arsenic concentrations in the shoots (*A*) and roots (*B*) of the wild-type rice (cv. Nipponbare) and a Tos-17 insertion line for Lsi6. The seedlings were exposed to 2 μM As(III) for 7 days. Data are means $\pm$ SD ($n = 3$).

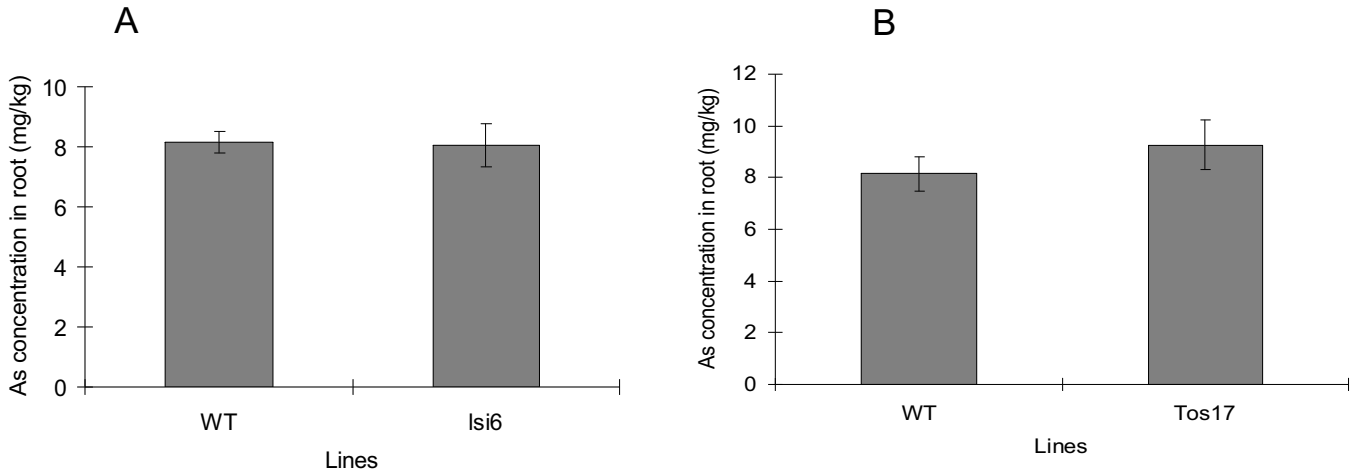

Fig. S3. Short-term As uptake by the wild-type rice [cv. Dongjin for *lsi6* (*A*) and Nipponbare for Tos17 (*B*)] and two independent knockdown mutants. Roots of 20-day-old seedlings were exposed to 2 μM As(III). After 30 min, the roots were desorbed with ice-cold 1 mM KH_2PO_4, 0.5 mM $Ca(NO_3)_2$, and 5 mM MES (pH 5.6) for 10 min. The As concentrations in the roots were determined by ICP-MS. Data are means $\pm$ SD ($n = 4$).

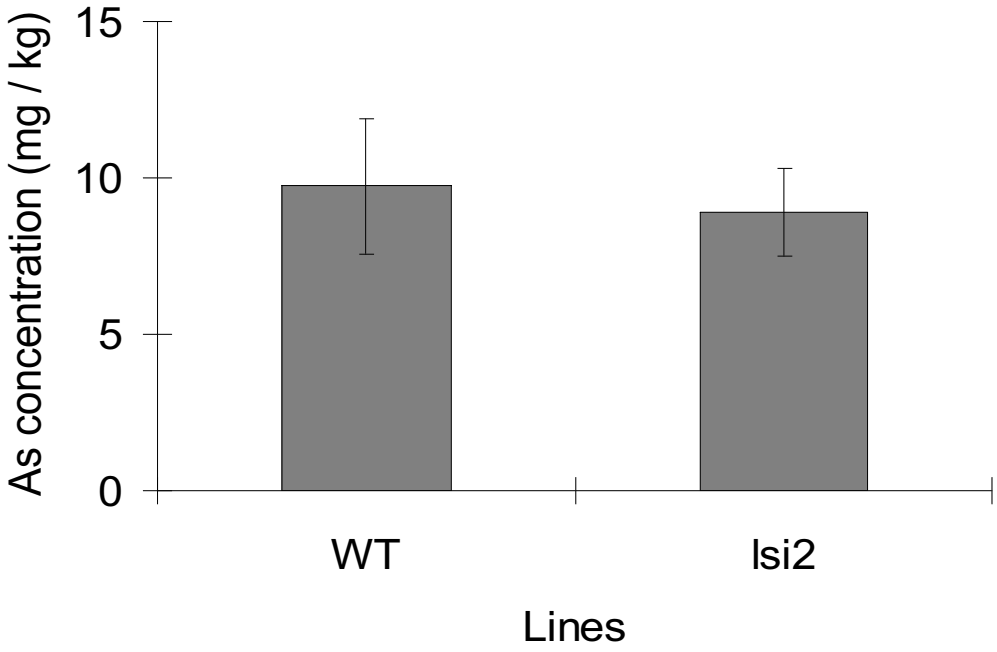

Fig. S4. Short-term As uptake by the wild-type rice (cv. T-65) and *lsi2* mutant. Roots of 15-day-old seedlings were exposed to 5 μM As(III). After 30 min, the roots were desorbed with ice-cold 1 mM KH_2PO_4, 0.5 mM $Ca(NO_3)_2$, and 5 mM MES (pH 5.6) for 10 min. The As concentrations in the roots were determined by ICP-MS. Data are means $\pm$ SD ($n = 4$).

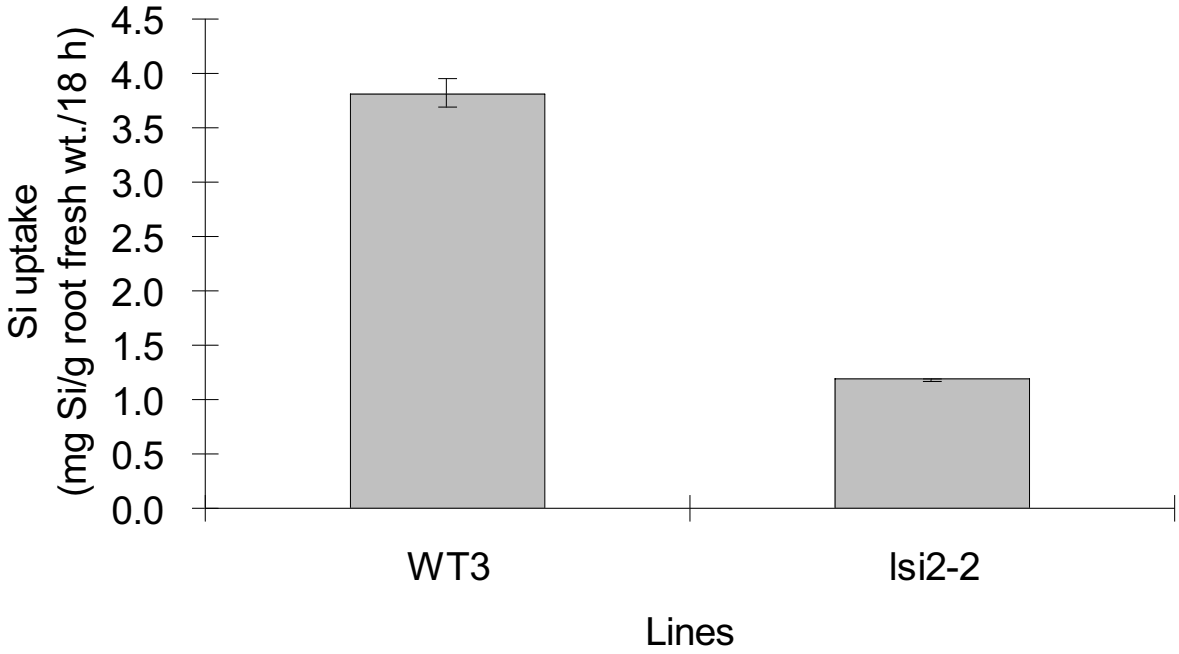

Fig. S5. Silicon uptake by the wild-type rice (cv. Koshihikari) and a novel mutant, *lsi2-2*. The seedlings were exposed to a nutrient solution containing 1 mM Si as silicic acid for 18 h. Data are means ± SD ($n = 3$).

Fig. S6. Mutation of Lsi2 in the novel mutant *lsi2-2*.