



**Figure S1. PCR reactions used to validate multiple-gene deletion strain construction.**

PCR reactions A1 and A2 check for insertion of the *tdk-kanR* cassette in the proper context. PCR reactions B1, B2, C, and D verify that the deleted region is missing from the edited chromosome.

**Table S1** lists the primer sequences used in each reaction for each designed ADP1 deletion.

**Table S3** reports the results of each type of PCR reaction for each candidate deletion strain.