

**FIG S6** Construction of *ALG9* and *ALG12* complementation strain. (A) Strategy for CNAG\_05881 complementary using the *NEO* split marker. Stable transformants were selected on YPD medium containing *NEO*. (B) Strategy for CNAG\_02715 complementary using the NAT split marker. Stable transformants were selected on YPD medium containing NAT. (C) Spotting analysis of growth recovery of *C. neoformans alg9* $\Delta$ ::*ALG9* and *alg12* $\Delta$ ::*ALG12* strains under heat stress, ER stress, cell-wall stress, osmotic stress, and antifungal drug treatments. (D) HPLC-based neutral glycan profiles of H99, *alg9* $\Delta$ ::*ALG9*#1, *alg12* $\Delta$  and *alg12* $\Delta$ ::*ALG12* #2 strains.