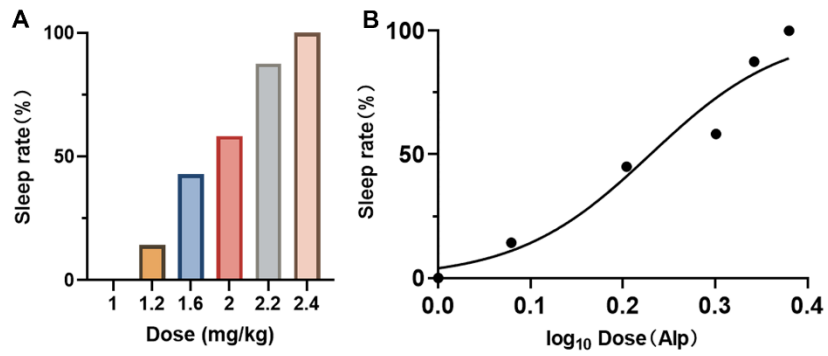
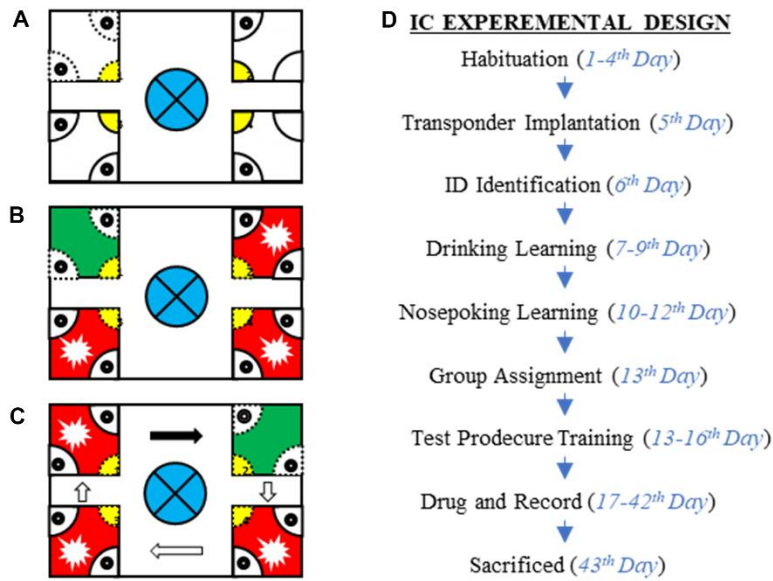


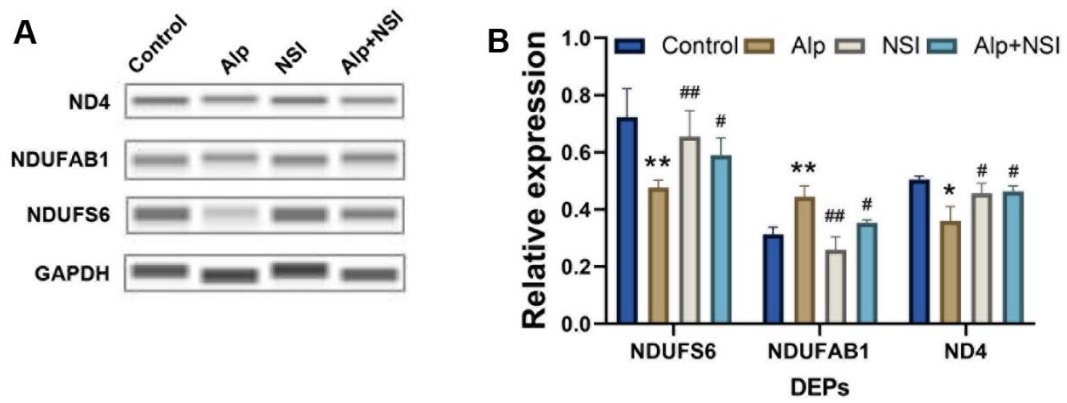
## SUPPLEMENTARY FIGURES



**Supplementary Figure 1.** The dose-sleep rate change (A) and ED50 curve (B) of hypnotic effect induced by different doses of Alp in mice. (n=8).



**Supplementary Figure 2.** Structure and experimental program design of IntelliCage (A-C) and Intelligent cage system test protocol (D).



**Supplementary Figure 3. Western blotting detected the results of ND4, NDUFAB1, NDUFS6 in each group.** (A) Protein banding results plot for ND4, NDUFAB1, NDUFS6 in each group; (B) Statistics of relative protein expression of ND4, NDUFAB1 and NDUFS6 in each group. n = 3, Data are presented as mean ± SEM, \* $p < 0.05$ , \*\* $p < 0.01$  vs. control, # $p < 0.05$ , ## $p < 0.01$  vs. the Alp group.