## Supporting Information Figure S1



**Figure S1. A**, N2a cells were transfected with EGFP or EGFP-AHI1. Forty-eight hr after transfection, the cell lysates were subjected to immunoblot analysis. The relative intensities of TH to GAPDH shown in lower panel were analyzed. \*, P < 0.05, n=3. **B**, HEK293 cells were transfected with PGL3-Basic-Luc or PGL3-*TH*-Luc along with EGFP or EGFP-AHI1. Forty-eight hr after transfection, Luciferase reporter assays were performed. \*\*\*, P < 0.001, ns, no statistical significance, n=3.



**Figure S2.** N2a cells were transfected with indicated siRNAs. Seventy-two hr after transfection, the total cell lysates were subjected to immunoblot analysis. The relative levels of Rev-Erb $\alpha$  or TH to GAPDH in (lower panel) were analyzed. \*\*\*, *P* < 0.001, n=3.

Figure S3



**Figure S3.** HEK293 cells were transfected with PGL3-*TH*-Luc or PGL3-m*TH*-Luc along with HA or HA-BMAL1/HA-CLOCK (B/C), respectively. Forty-eight hr after transfection, Luciferase reporter assay was performed. \*\*\*, P < 0.001, ns, no statistical significance, n=3.

## Figure S4



Ahi1-/-Ahi1+/-

## **Figure S4 continued**



**Figure S4.** Relative mRNA levels of *Per1*, *Per2*, *Per3*, *Cry1* or *Cry2* of *Ahi1* KO mouse midbrains and littermate controls were examined using qRT-PCR, \*, P < 0.05, \*\*, P < 0.01, n=5.