

## SUPPLEMENTARY FIGURE LEGENDS

**Supplementary Figure S1. Acute responses of *Per1* promoter to treatment with several compounds.** WT MEFs were transfected with *Per1*-dsluc and treated with ethanol (0.1%; sky line), DEX (1  $\mu$ M; black line), DMSO (0.1%; gray line), forskolin (10  $\mu$ M; green line), or ionomycin (1  $\mu$ M; purple line) continuously during the real-time luminescence recording.

**Supplementary Figure S2. Circadian oscillation patterns of *Per2* promoter serial deletion mutants.** WT MEFs were transfected with *Per2* promoter serial deletion mutants: *Per2* (-1671)::dsluc, *Per2* (-271)::dsluc, *Per2* (-201)::dsluc, or *Per2* (-171)::dsluc. After 2-hr DEX (1  $\mu$ M) treatment, *Per2* promoter activities were recorded by the real-time luminescence monitoring.

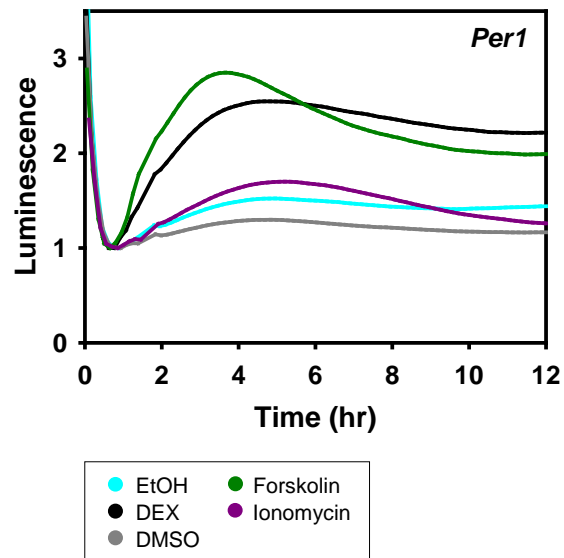
**Supplementary Figure S3. DEX responsiveness of *Per1* did not depend on E-box.** (A) Schematic diagram of *Per1* promoter constructs. (B) WT or mutant constructs (GRE or E-box mutant) of the *Per1* promoter were transfected into WT MEFs. Cells were harvested after treatment with ethanol (0.1%) or DEX (1  $\mu$ M) for 10-hr. Luciferase activities were normalized to renilla luciferase activities, and the fold induction was calculated as the ratio of the value of the DEX-treated group versus that of the ethanol-treated group. Values are the mean  $\pm$  standard error of the mean (SEM) of three or four independent experiments performed in triplicates (\*,  $P < 0.05$ ).

**Supplementary Figure S4. GBS responded to DEX in the absence of BMAL1.** (A) The intron region containing GBS was subcloned into an SV40 promoter driven-luciferase (GBS-SV40P). (B) This construct was transfected into WT and *Bmal1*<sup>-/-</sup> MEFs, and cells were harvested after treatment with ethanol (0.1%) or DEX (1  $\mu$ M) for 10-hr. Luciferase activities were normalized to renilla luciferase activities, and the fold induction was calculated as the ratio of the value of the DEX-treated group versus that of the ethanol-treated group. Values are the mean  $\pm$  standard error of the mean (SEM) of three or four independent experiments performed in triplicates.

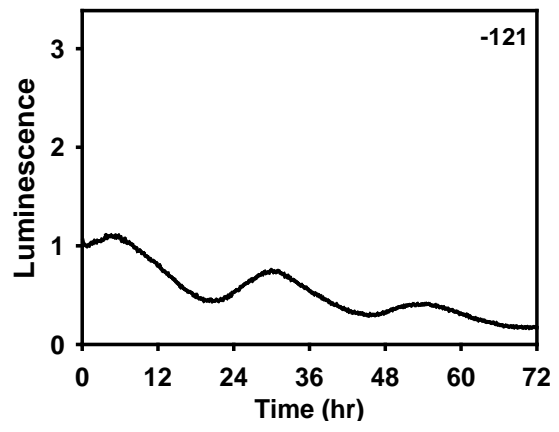
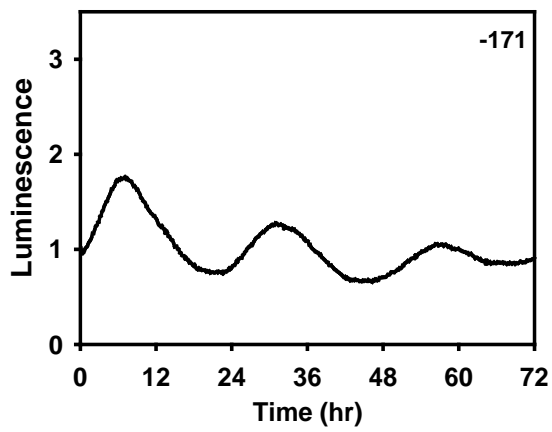
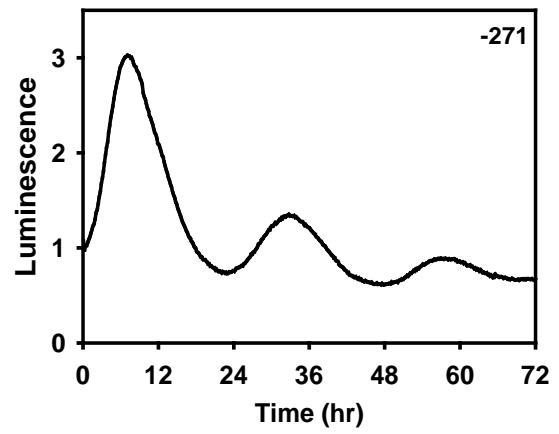
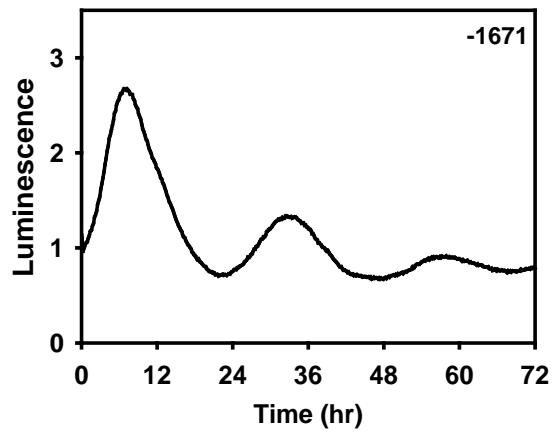
**Supplementary Figure S5. Decreased GR levels in *Bmal1*<sup>-/-</sup> MEFs.** WT and *Bmal1*<sup>-/-</sup> MEFs were harvested after treatment with ethanol (V; 0.1%) or DEX (D; 1  $\mu$ M) for 1-hr. Western blot analysis was performed using GR, BMAL1, and tubulin antibodies.

**Supplementary Figure S6. Circadian oscillation patterns of *Per2* induction mutant reporters.** (A) WT or *Per2* induction mutant reporters (GRE<sup>mut</sup> or E2<sup>mut</sup>) were transfected into WT MEFs. Cells were treated with DEX (1  $\mu$ M) for 2-hr, and bioluminescence was recorded by the real-time luminescence monitoring. (B) The phase of the second peak was measured for WT and *Per2* induction mutant reporters. Values are the mean  $\pm$  standard error of the mean (SEM) of three or four independent experiments performed in triplicates.

# Supplementary Figure S1.

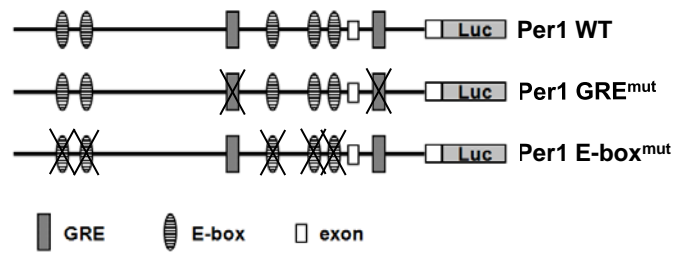


## Supplementary Figure S2.

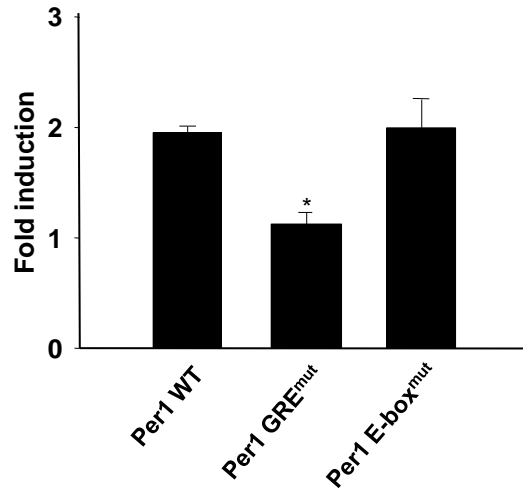


# Supplementary Figure S3.

**A**



**B**

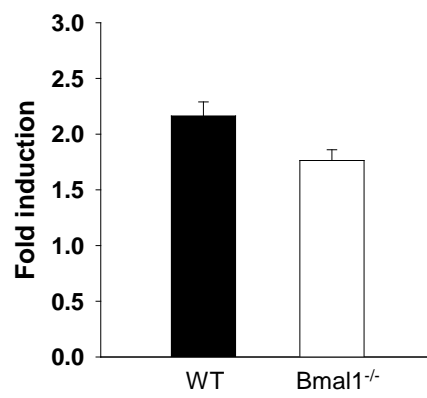


# Supplementary Figure S4.

**A**

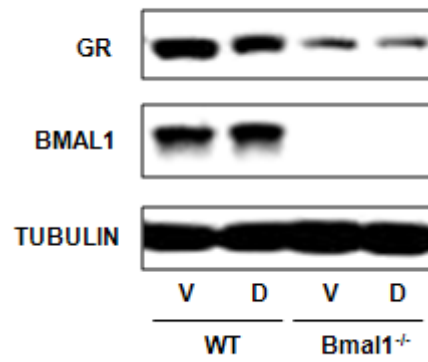


**B**



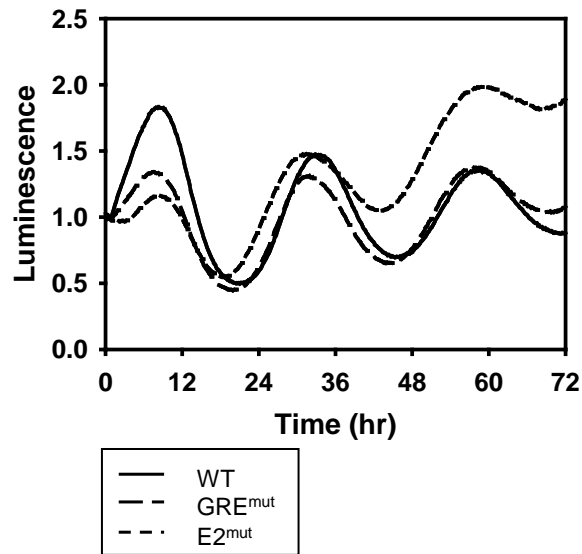
# Supplementary Figure S5.

WB:



# Supplementary Figure S6.

**A**



**B**

