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Supplementary Information for

Mutation of a PER2 phosphodegron perturbs the circadian phosphoswitch

Shusaku Masuda1, Rajesh Narasimamurthy2, Hikari Yoshitane1,
Jae Kyoung Kim3, Yoshitaka Fukada1,*, and David M. Virshup2,4,*

1 Department of Biological Sciences, School of Science, The University of Tokyo, Hongo 7-3-1, Bunkyo-ku, Tokyo 113-0033, Japan.
2 Programme in Cancer and Stem Cell Biology, Duke-NUS Medical School, 169857 Singapore
3 Department of Mathematical Sciences, Korea Advanced Institute of Science and Technology, Daejeon 305-701, Korea
4 Department of Pediatrics, Duke University Medical Center, Durham, NC 27710, United States

Dr. David M. Virshup
E-mail: david.virshup@duke-nus.edu.sg

Dr. Yoshitaka Fukada
E-mail: sfukada@mail.ecc.u-tokyo.ac.jp

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Figures S1 and S2

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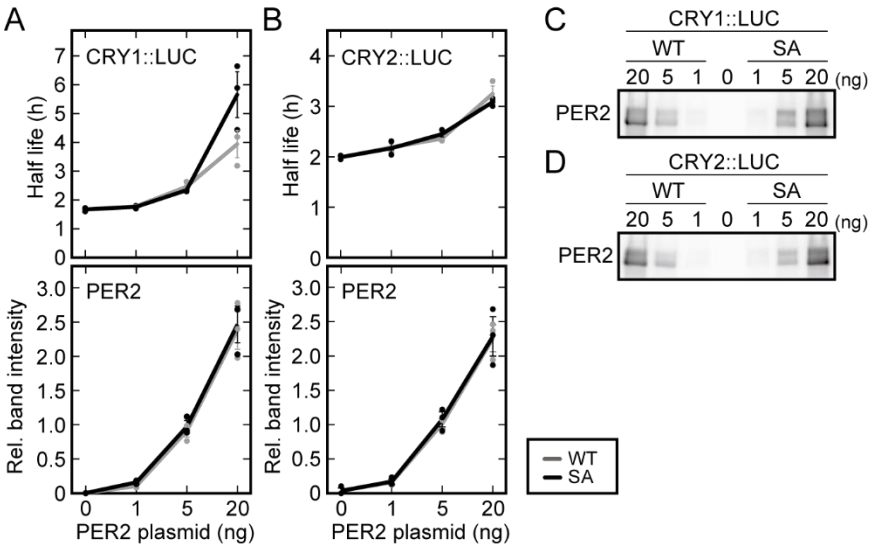

Fig. S1. PER2 stabilizes CRY1::LUC and CRY2::LUC

(A, B) Half-lives of the bioluminescence derived from CRY1::LUC (A, upper panel) or CRY2::LUC (B, upper panel) after CHX treatment. The detailed method for calculation of half-lives is described in Materials and methods. Myc-PER2 (WT) or Myc-PER2-S478A (SA) were co-transfected with CRY1::LUC or CRY2::LUC. The abundance of PER2 proteins were analyzed by immunoblotting with anti-PER2 antibody (A, B, lower panel). Mean values ± SEM obtained from three biological replicates are given.

(C) Representative western blot for PER2, corresponding to (A, lower panel).

(D) Representative western blot for PER2, corresponding to (B, lower panel).

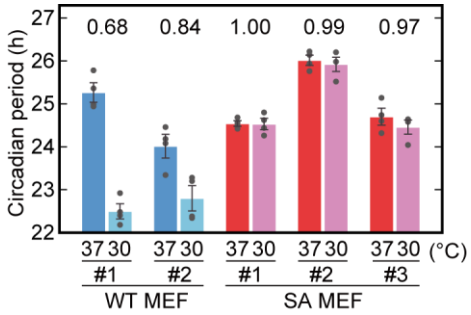

Fig. S2. Temperature compensation of the period is compromised by the PER2-S478A mutation

The circadian period of cellular rhythms was calculated. Mean values ± SEM obtained from PER2::LUC MEFs (WT) and PER2-S478A::LUC (SA) MEFs are given (n = 4). Q_{10} values were shown above the bars.