

SUPPLEMENTARY FIGURE LEGENDS

Fig S1. (A) Scheme of *Nono* genetrapped embryonic stem cell clone YHA266. Purple arrows correspond to primers designed along 2nd Intron to map the β -galactosidase insertion reporter construct (red arrow). Below are diagrammed the transcript formed, and its splicing pattern. Red primers were used in part B. **(B)** PCR from DNA harvested from wildtype and *Nono*^{gt} mouse fibroblasts, demonstrating the truncated gene product in mutants. **(C)** Domain structure of NONO, SFPQ, and PSPC1 proteins. P, Q = proline- and glutamine-rich regions; RRM = RNA recognition motifs; NOPS = NOPS domain; NLS = nuclear localization sequence. **(D)** Cladogram showing the relationship of the NONO family of proteins to other RNA-binding proteins.

Fig S2. (A) Bioluminescence measured after transient transfection of 3T3 cells transfected with an *E-box-luciferase* reporter, and vectors expressing CLOCK and BMAL proteins and increasing amounts of SFPQ as indicated. N=6 experiments for parts B-D, +/- SE. **(B)** Similar experiments with a vector expressing PSPC1. **(C)** Similar experiments with a vector expressing *Neat1*.

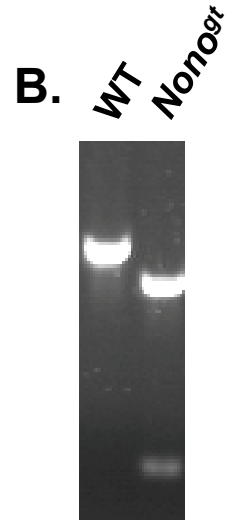
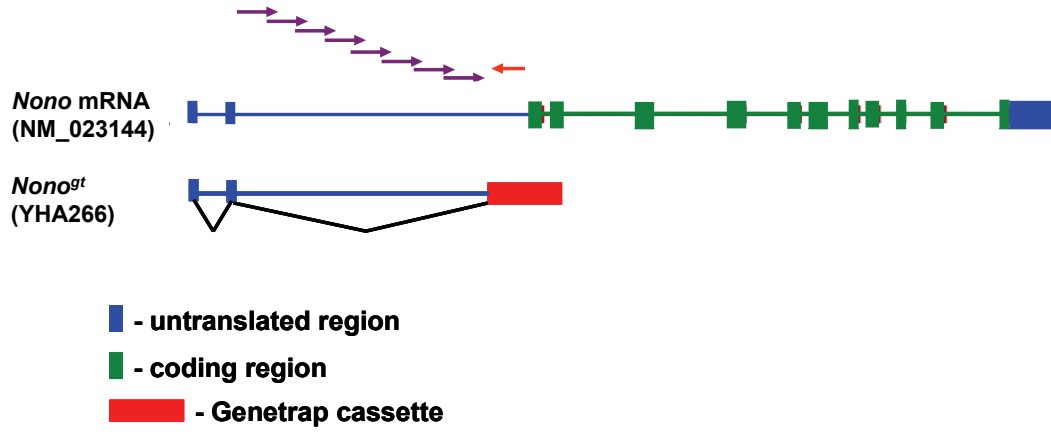
Fig S3. (A) Wheel running activity during a skeleton photoperiod regimen of a representative wildtype, *Pspc1*^{gt/gt}, and *Sfpq*^{gt/+} mouse. Grey shading, darkness. After a standard period of LD entrainment, mice received an hour-long light pulse at the normal time of lights-on or lights-off. **(B)** Averaged activity from 6 wildtype

and 6 *Pspc1^{gt/gt}* mice housed in a 1-hour-light skeleton photoperiod schedule. **(C)** Identical experiments for *Sfpq^{gt/+}* animals.

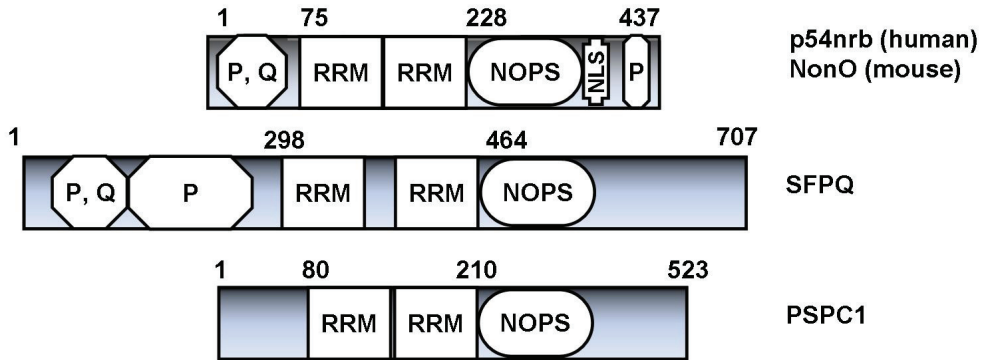
Fig S4. RNA expression from *Nono*, *Sfpq*, and *Pspc1*-genetrapped mice (striped bars) and wildtype littermates (black bars), measured by qPCR from liver extracts harvested at different times of day from mice in constant darkness. Detected RNAs are indicated in each panel. N=2 mice per timepoint, measured 4x in duplicate, +/- SE. **(A)** *Nono^{gt}* mice and littermates. **(B)** *Pspc1^{gt/gt}* mice and littermates. **(C)** *Sfpq^{gt/+}* mice and littermates.

Fig. S1

A.



C.



D.

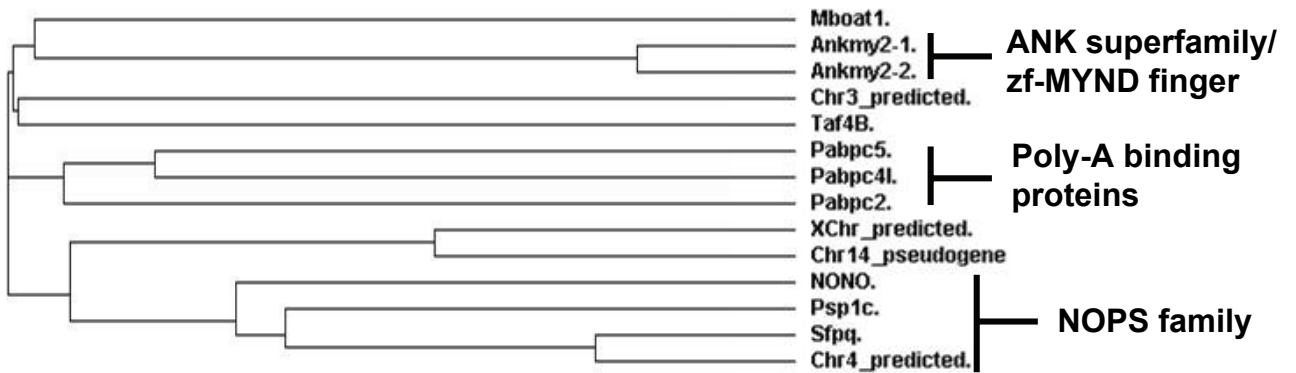


Fig S2

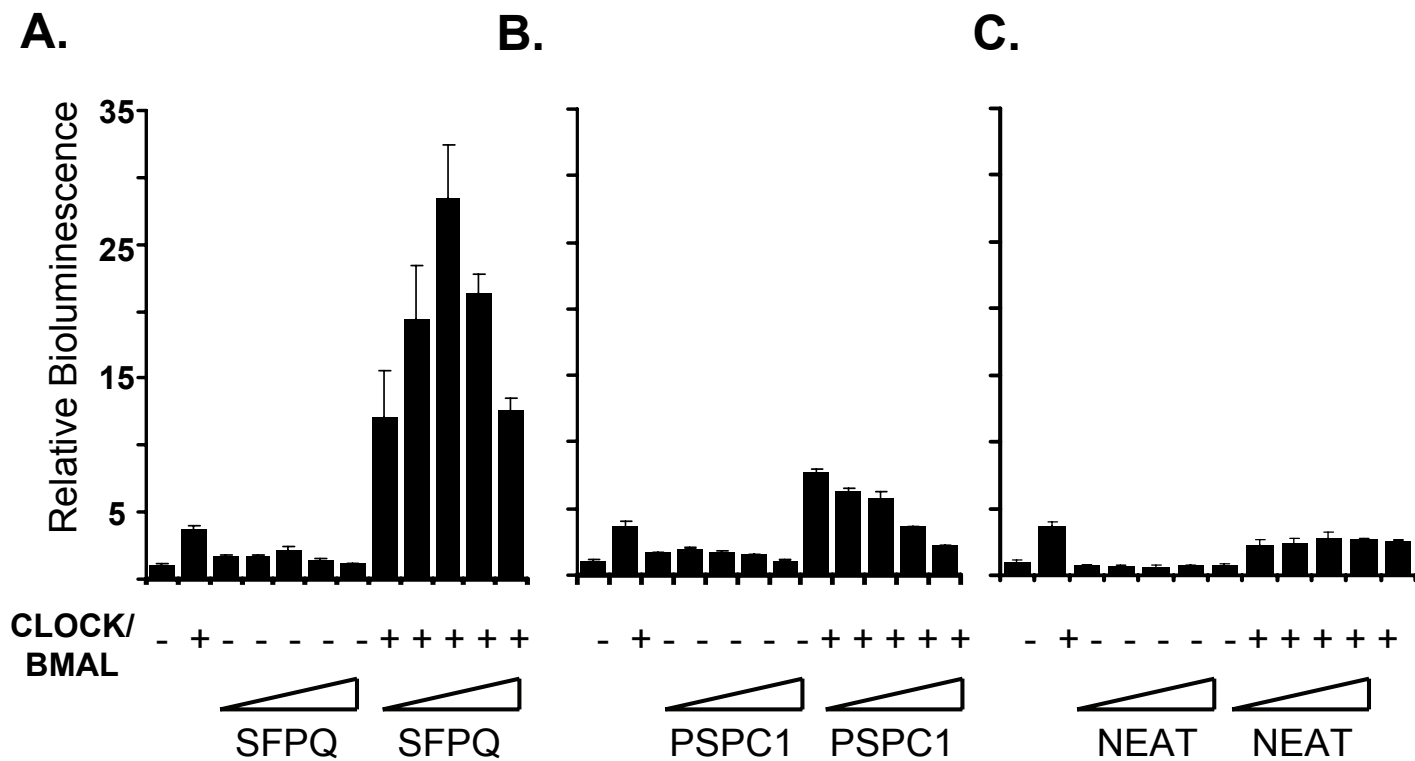
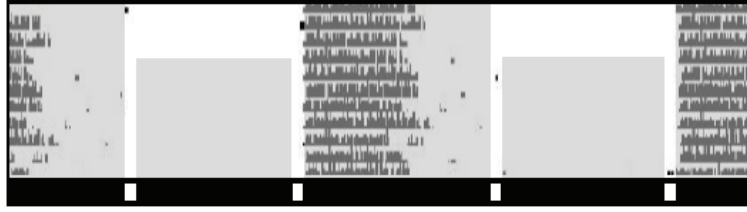


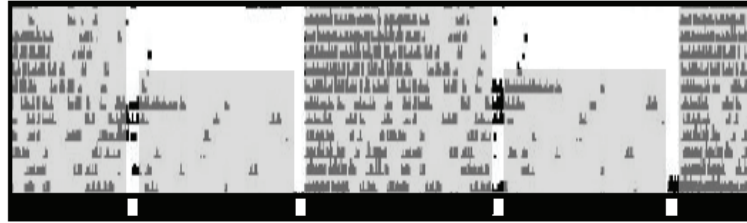
Fig S3

A.

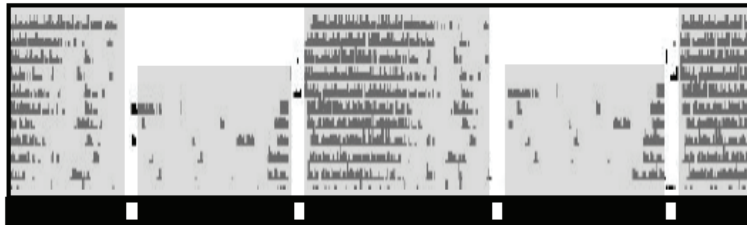
Wildtype



Pspc1^{gt/gt}

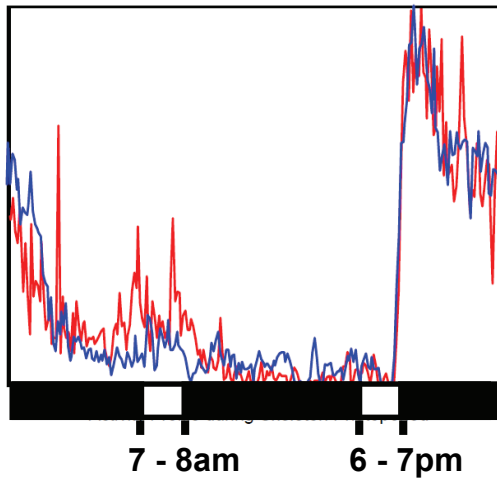


Sfpq^{gt/+}



B.

***Pspc1^{+/+}* (blue)
and *Pspc1^{gt/gt}* (red)**



C.

***Sfpq^{+/+}* (blue)
and *Sfpq^{gt/+}* (red)**

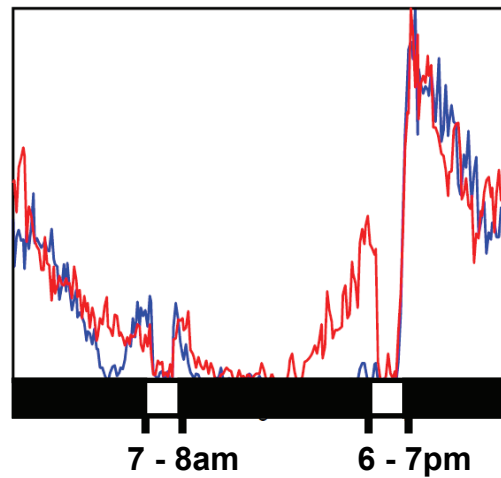
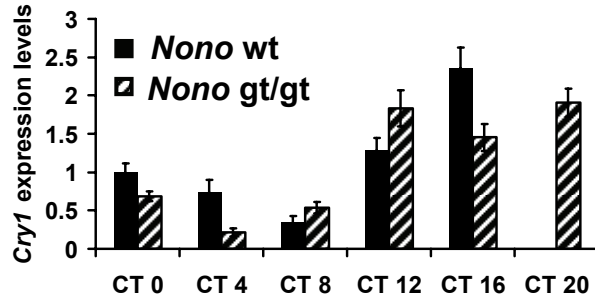
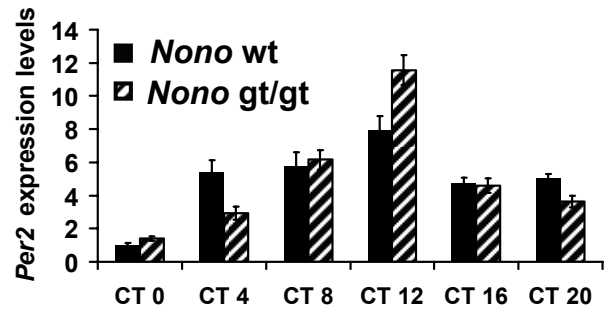
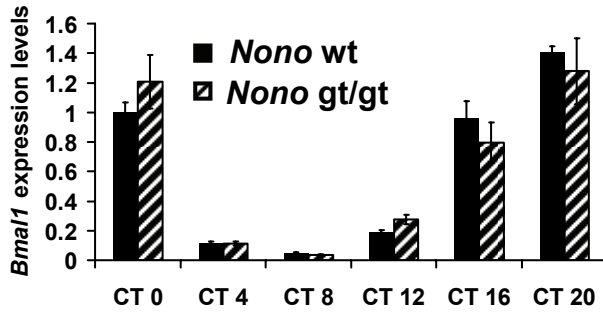
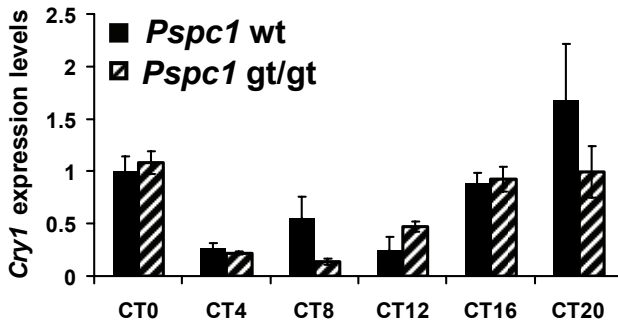
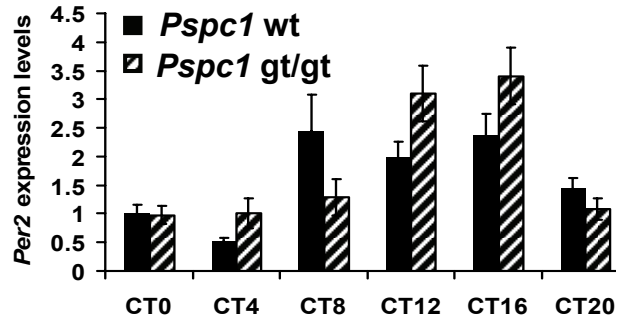
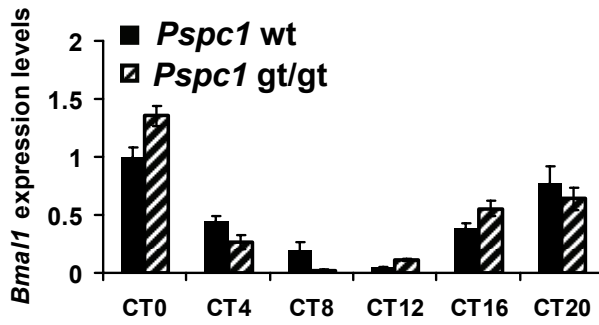


Fig S4

A.



B.



C.

