Table S9. Summary of phenotypic values, variability thresholds and distribution of V_A/V_G ratios for the circadian model [23]**.** The first three columns list the phenotype abbreviations used in this study, a text description of the phenotypes and their units. The thresholds used to filter out dataset with very low relative and/or absolute variability are listed in the next two columns, followed by the number of Monte Carlo simulations (out of 1000) passing the threshold. The last 7 columns contain quantiles and means of the V_A/V_G values for the datasets passing the variability threshold. Abbreviations: phosphorylated – phos., cytosolic – cyt., nuclear – nuc., bottom concentration – b.c., peak concentration – p.c.

Phenotype	Description (see legend for abbreviations)	Units	Variability threshold		# of valid datasets	Quantiles and mean values of V_A/V_G						
			rel.	abs.		$Q_{0.05}$	$Q_{0.1}$	$Q_{0.2}$	$Q_{0.3}$	$Q_{0.5}$	$Q_{0.8}$	mean
BC	B.c. of cyt. BMAL1 protein	nM	0.01	1e-8	979	0.43	0.65	0.91	0.97	0.99	1	0.91
BC(ttp)	Time to p.c. of cyt. BMAL1 protein	hours	0.01	1e-8	997	0.40	0.70	0.85	0.91	0.96	0.98	0.88
BCP	B.c. of cyt. phos. BMAL1 protein	nM	0.01	1e-8	953	0.82	0.88	0.93	0.96	0.99	1	0.95
BCP(ttp)	Time to p.c. of cyt. phos. BMAL1 protein	hours	0.01	1e-8	999	0.62	0.80	0.87	0.92	0.97	0.99	0.91
BN	B.c. of nuc. BMAL1 protein	nM	0.01	1e-8	999	0.37	0.67	0.84	0.93	0.98	0.99	0.89
BN(ttp)	Time to p.c. of nuc. BMAL1 protein	hours	0.01	1e-8	1000	0.48	0.72	0.83	0.89	0.95	0.98	0.88
BNP	B.c. of nuc. Phos. BMAL1 protein	nM	0.01	1e-8	979	0.82	0.91	0.97	0.99	1	1	0.97
BNP(ttp)	Time to p.c. of nuc. Phos. BMAL1 protein	hours	0.01	1e-8	999	0.66	0.82	0.89	0.94	0.98	0.99	0.93
CC	B.c. of cyt. CRY protein	nM	0.01	1e-8	1000	0.59	0.63	0.69	0.74	0.82	0.95	0.81
CC(ttp)	Time to p.c. of cyt. CRY protein	hours	0.01	1e-8	1000	0.10	0.16	0.27	0.39	0.67	0.94	0.61
CCP	B.c. of cyt. phos. CRY protein	nM	0.01	1e-8	969	0.61	0.68	0.74	0.79	0.86	0.95	0.84
CCP(ttp)	Time to p.c. of cyt. phos. CRY protein	hours	0.01	1e-8	1000	0.10	0.15	0.31	0.46	0.70	0.91	0.62
IN	B.c. of inactive complex between CLOCK-BMAL1 and PER-CRY	nM	0.01	1e-8	1000	0.51	0.62	0.73	0.80	0.87	0.95	0.83
IN(ttp)	Time to p.c. of inactive complex between CLOCK-BMAL1 and PER-CRY	hours	0.01	1e-8	1000	0.22	0.36	0.53	0.66	0.82	0.95	0.73
MB	B.c. of mRNA of the *Bmal1* gene	nM	0.01	1e-8	901	0.32	0.50	0.79	0.93	0.99	1	0.88
MB(ttp)	Time to p.c. of mRNA of the *Bmal1* gene	hours	0.01	1e-8	894	0.19	0.53	0.78	0.82	0.88	0.95	0.81
MC	B.c. of mRNA of the *Cry* gene	nM	0.01	1e-8	999	0.91	0.92	0.94	0.96	0.98	0.99	0.96

MC(ttp)	Time to p.c. of mRNA of the *Cry* gene	hours	0.01	1e-8	1000	0.52	0.66	0.82	0.88	0.96	0.99	0.88
MP	B.c. of the mRNA of the *Per* gene	nM	0.01	1e-8	997	0.90	0.92	0.94	0.95	0.98	0.99	0.96
MP(ttp)	Time to p.c. of the mRNA of the *Per* gene	hours	0.01	1e-8	999	0.32	0.52	0.74	0.87	0.96	0.99	0.85
PC	B.c. of cyt. PER protein	nM	0.01	1e-8	1000	0.41	0.48	0.57	0.63	0.72	0.88	0.72
PC(ttp)	Time to p.c. of cyt. PER protein	hours	0.01	1e-8	1000	0.04	0.07	0.14	0.23	0.46	0.88	0.49
PCC	B.c. of cyt. PER-CRY complex	nM	0.01	1e-8	1000	0.8	0.83	0.87	0.90	0.93	0.97	0.92
PCC(ttp)	Time to p.c. of cyt. PER-CRY complex	hours	0.01	1e-8	1000	0.49	0.62	0.77	0.84	0.92	0.98	0.85
PCCP	B.c. of cyt. Phos. PER-CRY complex	nM	0.01	1e-8	1000	0.92	0.94	0.95	0.96	0.98	0.99	0.97
PCCP(ttp)	Time to p.c. of cyt. phos. PER-CRY complex	hours	0.01	1e-8	1000	0.46	0.61	0.75	0.83	0.92	0.98	0.85
PCN	B.c. of nuc. PER-CRY complex	nM	0.01	1e-8	1000	0.52	0.60	0.69	0.75	0.85	0.95	0.81
PCN(ttp)	Time to p.c. of nuc. PER-CRY complex	hours	0.01	1e-8	999	0.62	0.72	0.84	0.89	0.95	0.98	0.90
PCNP	B.c. of nuc. Phos. PER-CRY complex	nM	0.01	1e-8	1000	0.80	0.83	0.87	0.90	0.94	0.98	0.92
PCNP(ttp)	Time to p.c. of nuc. phos. PER-CRY complex	hours	0.01	1e-8	999	0.59	0.70	0.83	0.89	0.95	0.99	0.89
PCP	B.c. of cyt. phos. PER protein	nM	0.01	1e-8	989	0.70	0.75	0.81	0.85	0.91	0.96	0.88
PCP(ttp)	Time to p.c. of cyt. phos. PER protein	hours	0.01	1e-8	1000	0.04	0.07	0.15	0.24	0.46	0.88	0.50
Period	Time for one complete cycle	hours	0.01	0.1	997	0.60	0.81	0.90	0.94	0.98	0.99	0.92