

	<i>Wild Type</i>		<i>Shank3<sup>ΔC</sup></i>
		<i>Period (h)*</i>	
LD Week 1	24.0 ± 0.0		21.3 ± 2.7
LD Week 2	24.0 ± 0.0		23.9 ± 0.1
LD Week 3	24.0 ± 0.0		24.2 ± 0.9
LD Week 4	24.0 ± 0.0		24.0 ± 0.0
LD Week 5	24.0 ± 0.1		24.1 ± 0.1
		<i>Alpha (h)†</i>	
LD Week 1	9.8 ± 0.6		8.2 ± 0.7
LD Week 2	10.0 ± 0.5		8.2 ± 0.7
LD Week 3	9.7 ± 0.5		8.3 ± 0.9
LD Week 4	9.1 ± 0.5		8.8 ± 0.7
LD Week 5	10.1 ± 0.6		9.0 ± 0.7
		<i>Activity (rev/day)</i>	
LD Week 1	39298.0 ± 1517.1	↕	14509.7 ± 1273.4
LD Week 2	42867.1 ± 550.2	↕	15256.3 ± 414.8
LD Week 3	40513.3 ± 819.3	↕	20229.9 ± 1424.4
LD Week 4	37703.6 ± 325.1	↕	26488.7 ± 1180.3
LD Week 5	40210.9 ± 549.5	↕	28560.9 ± 1545.7
		<b>p &lt; 0.0001</b>	

**Supplementary file 1.** Wheel-running behavior in *Shank3<sup>ΔC</sup>* mice across 5 weeks of continuous light:dark (LD) cycles. Summary of wheel-running behavior measured for each week of 12:12 h light:dark cycles for both wild type and *Shank3<sup>ΔC</sup>* mice. A linear mixed-effects ANOVA was used to estimate the contributions of genotype and the interaction between genotype and time for period, alpha, and wheel-running activity for LD week 1 through 5. There is no significant interaction effect for genotype x time for period ( $p = 0.41$ ), but there is a significant effect of genotype ( $p = 0.047$ , indicated by \*). There is no significant interaction effect for genotype x time for alpha ( $p = 0.43$ ), but there is a significant effect of time ( $p = 0.004$ , indicated by †). There is a significant interaction effect (indicated by vertical bar) for genotype x time for activity ( $p < 0.0001$ ). See Supplementary file 1 – source data 1 for details. Values are means ± SEM for wild type ( $n = 8$ ) and *Shank3<sup>ΔC</sup>* ( $n = 8$ ) mice.