**Supplementary Tables**

Table S1.Rhythmic parameters of core circadian clock genes in fast muscle of Chinese perch with normal feeding

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Gene | Amplitude | Mesor | Acrophase (h) | *P* value |
| *Clock*  *Arntl1*  *Arntl2*  *Npas2*  *Cry1*  *Cry2*  *Cry3*  *Cry-dash*  *Nr1d1*  *Nr1d2*  *Rorα*  *Timeless*  *Per1*  *Per2*  *Per3* | 0.99  0.63  0.08  0.63  0.26  0.97  0.35  0.36  0.41  0.38  0.22  0.14  0.31  0.25  0.16 | 2.00  1.97  0.66  1.25  1.12  2.16  0.95  1.39  1.34  0.44  1.34  0.89  0.58  1.61  0.98 | 15.47  13.94  3.90  16.50  17.61  12.03  1.34  4.62  18.76  0.69  10.28  0.31  3.74  9.70  3.82 | 0.00  0.01  0.75  0.00  0.26  0.00  0.05  0.30  0.07  0.01  0.05  0.12  0.03  0.14  0.03 |

Note: Amplitude is half the distance between the two waveform peaks fitted. Median is the average of the curve. Acrophase is the radian corresponding to the time point of the highest amplitude. *P* value is the noise/signal amplitude ratio in cosine analysis.

Table S2.Rhythmic parameters of core circadian clock genes in fast muscle of Chinese perch with fasting for 1 d

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Gene | Amplitude | Mesor | Acrophase (h) | *P* value |
| *Clock*  *Arntl1*  *Arntl2*  *Npas2*  *Cry1*  *Cry2*  *Cry3*  *Cry-dash*  *Nr1d1*  *Nr1d2*  *Rorα*  *Timeless*  *Per1*  *Per2*  *Per3* | 2.72  0.79  0.09  0.72  0.02  3.15  0.17  1.30  0.16  0.78  0.95  0.23  0.53  0.34  0.71 | 2.93  2.84  1.11  1.48  0.98  4.59  0.95  2.54  0.73  1.36  1.90  0.96  1.23  2.17  1.27 | 7.72  14.21  12.91  19.52  0.84  11.77  23.61  15.55  2.02  7.68  6.65  18.57  6.65  10.93  5.81 | 0.01  0.12  0.00  0.09  0.98  0.03  0.01  0.03  0.04  0.00  0.02  0.03  0.00  0.28  0.00 |

Note: The same as Table S1.

Table S3.Rhythmic parameters of core circadian clock genes in fast muscle of Chinese perch with fasting for 5 d

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Gene | Amplitude | Mesor | Acrophase **(**h**)** | *P* value |
| *Clock*  *Arntl1*  *Arntl2*  *Npas2*  *Cry1*  *Cry2*  *Cry3*  *Cry-dash*  *Nr1d1*  *Nr1d2*  *Rorα*  *Timeless*  *Per1*  *Per2*  *Per3* | 0.54  0.32  0.36  0.33  0.23  0.99  0.23  0.25  0.32  0.21  0.14  0.23  0.39  0.26  0.42 | 0.90  0.85  1.15  0.85  0.94  1.80  0.96  0.83  0.79  0.73  0.34  1.14  0.55  1.14  0.69 | 16.66  16.77  17.00  17.46  20.06  10.35  19.33  0.11  20.70  0.42  0.69  5.46  1.95  10.47  23.00 | 0.03  0.24  0.27  0.21  0.52  0.00  0.18  0.01  0.00  0.03  0.44  0.66  0.01  0.01  0.03 |

Note: The same as Table S1.

Table S4.Rhythmic parameters of core circadian clock genes in fast muscle of Chinese perch with fasting for 7 d

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Gene | Amplitude | Mesor | Acrophase (h) | *P* value |
| *Clock*  *Arntl1*  *Arntl2*  *Npas2*  *Cry1*  *Cry2*  *Cry3*  *Cry-dash*  *Nr1d1*  *Nr1d2*  *Rorα*  *Timeless*  *Per1*  *Per2*  *Per3* | 0.24  0.46  0.27  0.17  0.24  0.11  0.17  0.14  0.43  0.09  0.67  0.07  0.03  0.51  0.16 | 0.60  1.27  0.78  1.23  1.05  0.28  1.06  1.23  1.92  0.93  1.69  0.57  0.58  1.10  0.48 | 4.74  8.94  3.48  5.54  6.26  4.09  7.64  12.57  15.28  7.64  5.35  17.42  6.88  8.33  7.22 | 0.29  0.03  0.10  0.68  0.76  0.62  0.84  0.77  0.57  0.84  0.22  0.77  0.97  0.20  0.64 |

Note: The same as Table S1.

**Supplementary Figures**



Figure S1. Cosinor analyses of the expression levels of core clock genes in the muscle of normal feeding Chinese perch during the daily light–dark cycle. The values are mean ± SE (n = 5). Letters on the error line indicate significance markers, and different letter represents statistical difference between different time point (P < 0.05). The red dotted lines show the periodic sinusoids fitted based on the periodic parameters of each gene expression. Tim = Timeless; ZT = zeitgeber time; 0, 1, 5 and 7 d = 0, 1, 5 and 7 days after fasting.



Figure S2. Cosinor analyses of the expression levels of core clock genes during the daily light–dark cycle in the muscle of Chinese perch with fasting for 1 d. The red dotted lines show the periodic sinusoids fitted based on the periodic parameters of each gene expression.



Figure S3. Cosinor analyses of the expression levels of core clock genes during the daily light–dark cycle in the muscle of Chinese perch with fasting for 5 d. The red dotted lines show the periodic sinusoids fitted based on the periodic parameters of each gene expression.



Figure S4. Cosinor analyses of the expression levels of core clock genes during the daily light–dark cycle in the muscle of Chinese perch with fasting for 7 d. The red dotted lines show the periodic sinusoids fitted based on the periodic parameters of each gene expression.