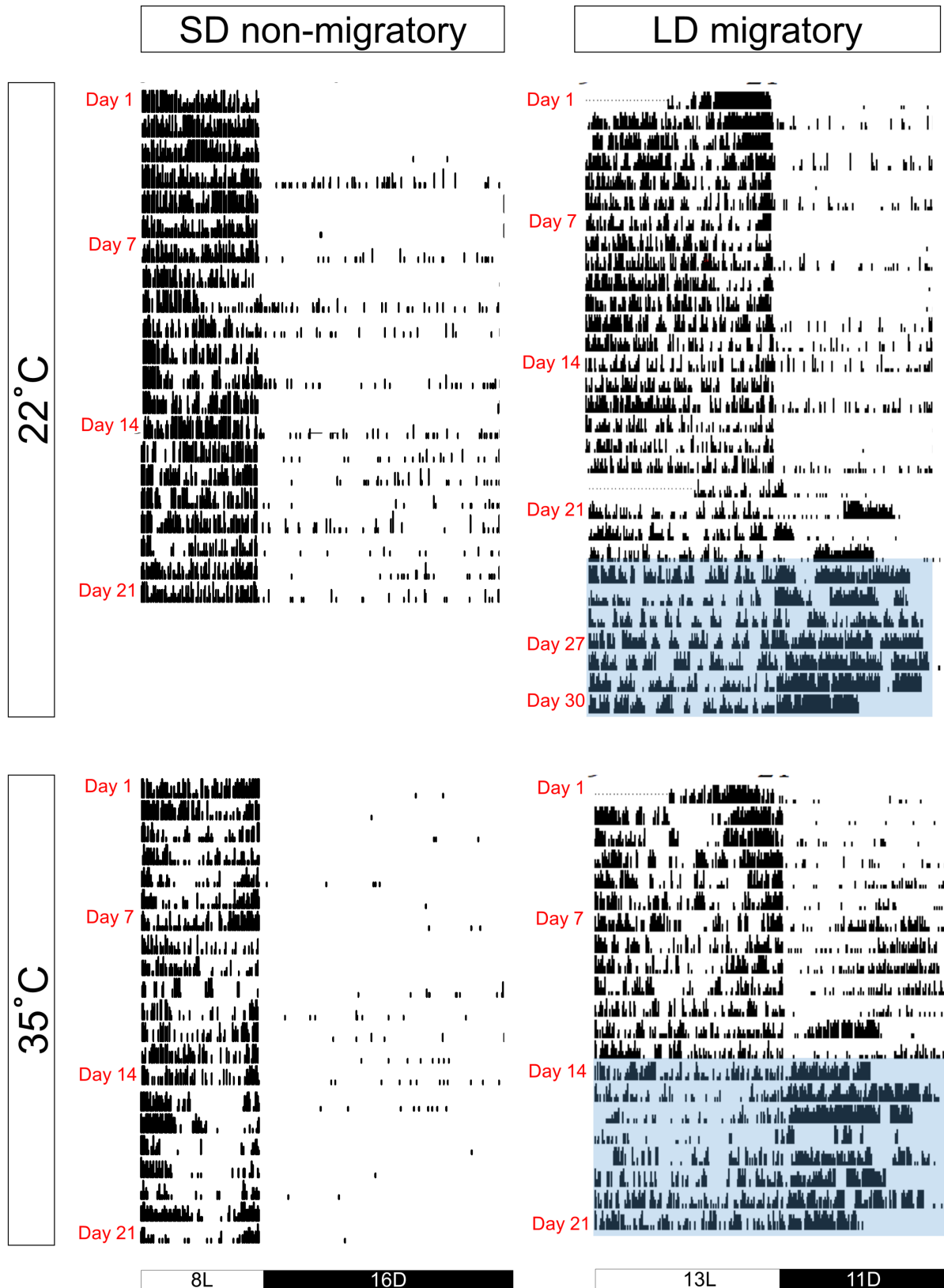


**Table S1.** Details of primers used in Real-time PCR

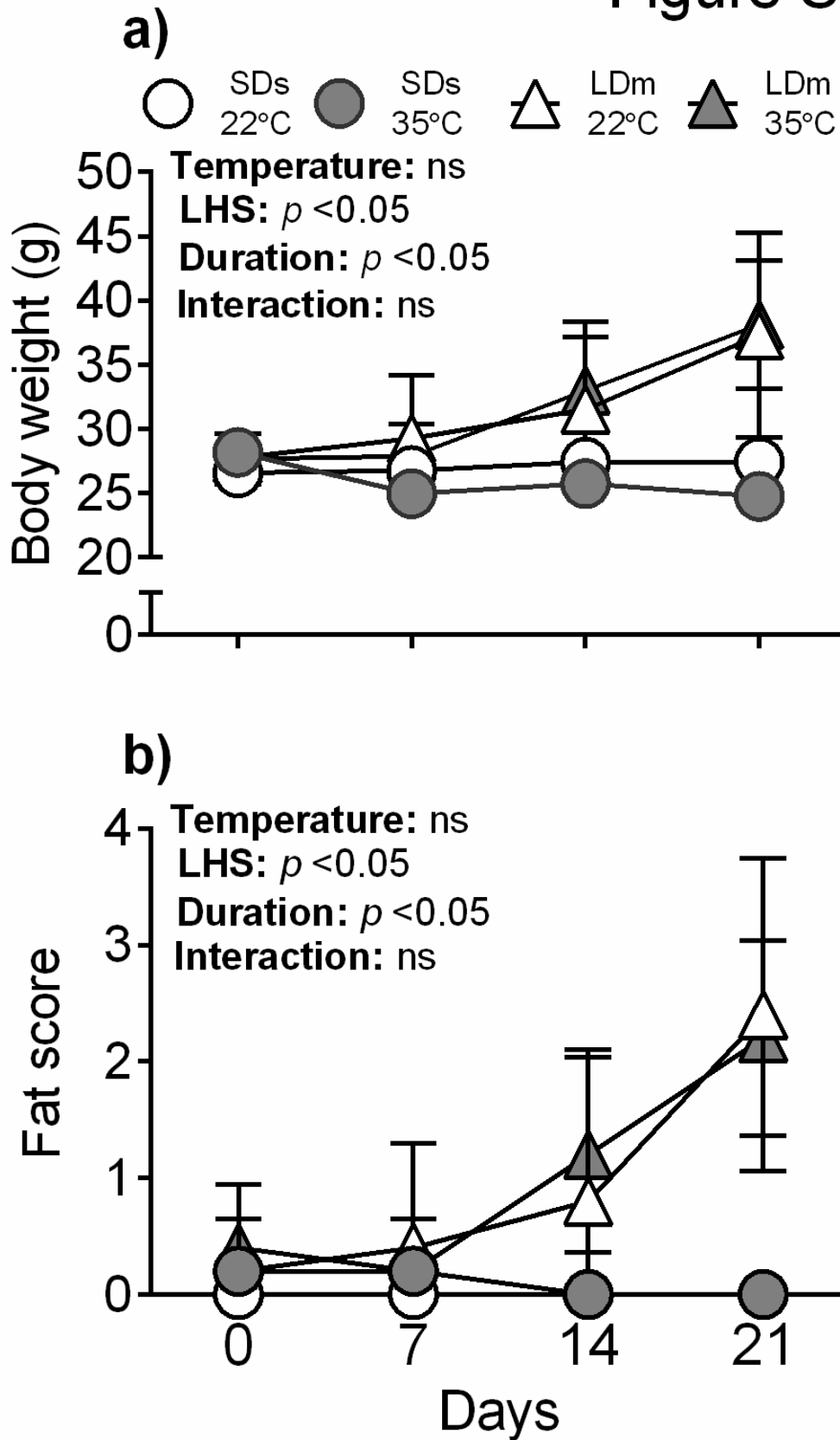
<b>Gene</b>	<b>Primer sequence</b>	<b>Accession number</b>
<i>trpv4</i>	F: 5' CTTCAACAGACCCATCCTCTTC 3' R: 5' TGTCAGGCGCTTCTTGTG 3'	MF979804
<i>trpm8</i>	F: 5' TCAGACCTGTGGAATGTTATGG 3' R: 5' CAGCAAAGAGGAAGAGGAAGAA 3'	MG461953
<i>ddc</i>	F: 5' TGCGGGAAGTGCTTTCAT 3' R: 5' CTAGGAGCCATTTGTGAGGATT 3'	MT394487
<i>th</i>	F: 5' GATCGTTGAGCTGGAATACTT 3' R: 5' CACATCTTCTGCTACCCCTCTTG 3'	KM272254
<i>adcyap1</i>	F: 5' ACATAGACGGCATCTTCACG 3' R: 5' CAGGACGGCTGCTAAGTATTTTC 3'	MF427847
<i>vps13a</i>	F: 5' GTGAATGGCAGTACACTTACGA 3' R: 5' TGGCATGGAAGACAGACTTAAC 3'	MT394488
<i>srd5a3</i>	F: 5' GCGTCTCTTGCCCTCATTAT 3' R: 5' ATCACTACACACCACCATGTC 3'	MT394489
<i>ar</i>	F: 5' ACCCCATAGCAAACACCATC 3' R: 5' TGGTCTACGTGGTCAAATGG 3'	KU175234
<i>myod1</i>	F: 5' CATGCCATCGGAGCAGTT 3' R: 5' GAGCAGGAGGACGCTTATTAC 3'	MF994521
<i>mstn</i>	F: 5' CACCGGTATTTGGCAGAGTAT 3' R: 5' GATTCCGTCCGTTCTCATCAA 3'	MT394490
<i>pvalb</i>	F: 5' GAGATAAGGACGGTGATGGTAAA 3' R: 5' GTTGGAAATTGGGCAGTGAAG 3'	MK986667
<i>mtor</i>	F: 5' GAGTCCTTACTCTGTGGTTTGAC 3' R: 5' CCTGCAGCCAAGTGTCTATT 3'	MT415821
<i>hif1a</i>	F: 5' TGCTGATCCTGCACTCAATAG 3' R: 5' AAGGGCTGGTTGGTTGTT 3'	MF994522

Figure S1



**Figure S1.** Representative 24-h activity record (actogram) of blackheaded buntings (*Emberiza melanocephala*) during photoperiod-induced non-migratory (under short days, SD) and migratory (under long days, LD) life history stages at 22 °C and 35 °C temperatures.

# Figure S2



**Figure S2.** Mean ( $\pm$  s.e.m.;  $n = 5$ ) weekly changes in body weight (a) and fat score (b) of blackheaded buntings (*Emberiza melanocephala*;  $n = 5$ ) during photoperiod-induced non-migratory (under short days, SD) and migratory (under long days, LD) life history stages at 22 °C and 35 °C temperatures.