

## Supplementary Information

### Thermal stress induces glycolytic beige fat formation via a myogenic state

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#### 1. Supplementary Table 1

Primer sequences used for quantitative RT-PCR in this study.

#### 2. Uncropped images of WBs

Western blot films used in Extended Fig.7c and 7f

#### 3. SI Video

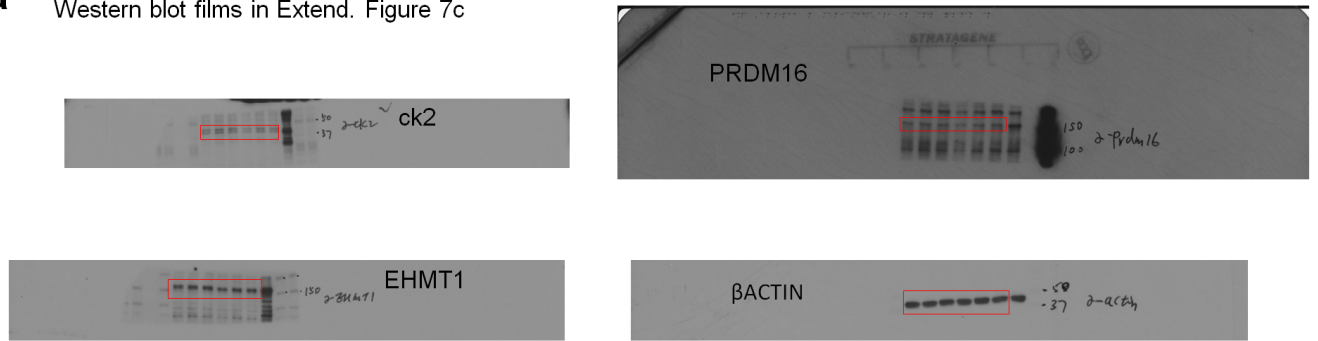
SVF cells isolated from the inguinal WAT of *Myod*-Cre<sup>ERT2</sup> reporter mice following  $\beta$ -blocker treatment. *Myod*-derived cells formed GFP<sup>+</sup> (green) myotubes and actively twitched even under pro-adipogenic conditions. Scale bar=100 $\mu$ m. (1 min 4 seconds)

**Supplementary Table.1 Primer sequences used for quantitative RT-PCR**

<b>Gene</b>	<b>Forward</b>	<b>Reverse</b>
<i>Ucp1</i>	CACCTTCCCCTGGACT	CCCTAGGACACCTTTATACCTAATGG
<i>Pgc1a</i>	AGCCGTGACCACTGACAACGAG	GCTGCATGGTTCTGAGTGCTAAG
<i>Cox8b</i>	GAACCATGAAGCCAACGACT	GCGAAGTTCACAGTGTTCC
<i>Elovl3</i>	TCC GCG TTC TCA TGT AGG TCT	GGA CCT GAT GCA ACC CTA TGA
<i>Cidea</i>	ATCACAACTGGCCTGGTTACG	TACTACCCGGTGTCCATTCT
<i>Adrb1</i>	CCGAAAGCAGGTGAATGCAA	AGCCAGTAAGCCATACTAAGCCACA
<i>Adrb2</i>	CATTGATGTGTTGTGCGTCA	ACTCGGGCCTTATTCTTGGT
<i>Adrb3</i>	CCTTCCGTGCTTCTGTGT	AGCCATCAAACCTGTTGAGC
<i>Adora2a</i>	GCCATCCATTGCCATCA	GCAATAGCCAAGAGGCTGAAGA
<i>Myh1</i>	GCGAATCGAGGCTCAGAACAA	GTAGTTCCGCCTTCGGTCTTG
<i>Myl1</i>	AGTGCTGACCAGATTGCCG	TCATGGGCAGAACTGTTCAA
<i>Mylpf</i>	TTCAAGGAGGCGTTCCTGTA	TAGCGTCGAGTTCCTCATTCT
<i>Mybpc1</i>	AAGAATGGTCTCTTGGTGAGTCA	CACCGATCCGGTTTGAGGT
<i>Acta1</i>	CCCAAAGCTAACCGGGAGAAG	CCAGAATCCAACACGATGCC
<i>MyoD</i>	CCACTCCGGGACATAGACTTG	AAAAGCGCAGGTCTGGTGAG
<i>Prdm16</i>	CAGCACGGTGAAGCCATTC	GCGTGCATCCGCTTGTG
<i>Pdha1</i>	GAAATGTGACCTTCATCGGCT	TGATCCGCCTTTAGCTCCATC
<i>Pdhb</i>	CGGTGCAGTTGACAGTTCGT	TCTTCCCCAAGCAGAAAACTTT
<i>Pkm2</i>	GCCGCCTGGACATTGACTC	CCATGAGAGAAATTCAGCCGAG
<i>Hk2</i>	TGATCGCCTGCTTATTCACGG	AACCGCCTAGAAATCTCCAGA
<i>Gapdh</i>	TGGATTTGGACGCATTGGTC	TTTGCCTGGTACGTGTTGAT
<i>Ldha</i>	TGTCTCCAGCAAAGACTACTGT	GACTGTACTTGACAATGTTGGGA
<i>Ldhb</i>	CATTGCGTCCGTTGCAGATG	GGAGGAACAAGCTCCCGTG
<i>Pfkip</i>	CGCCTATCCGAAGTACCTGGA	CCCCGTGTAGATTCCCATGC
<i>Eno1</i>	TGCGTCCACTGGCATCTAC	CAGAGCAGGCGCAATAGTTTTA
<i>Erra</i>	CTCAGCTCTTACCCAAACGC	CCGCTTGGTGATCTCACACTC
<i>Errb</i>	GGACTCGCCGCTATGTTT	CGTTAAGCATGACTCGCATTG
<i>Errg</i>	AAGATCGACACATTGATTCCAGC	CATGGTTGAACTGTAECTCCAC
<i>Gabpa</i>	AGCGCATCTCGTTGAAGAAG	TCTGCTCTTTTCTGTAGCCT
<i>Pdgfra</i>	TCCATGCTAGACTCAGAAGTCA	TCCGGTGGACACAATTTTTT
<i>Pax7</i>	GTGGAATCAGAACCCGACCTC	GTAGTGGTCTCTCAAAGGC
<i>Ebf2</i>	TATGTCAGGCTCATCGACTCTG	CATCACCTCGTGTGTCAGCA
<i>Bmpr1a</i>	AACAGCGATGAATGTCTTCGAG	GTCTGGAGGCTGGATTATGGG
<i>Bmpr1b</i>	CCCTCGGCCAAGATCCTA	CAACAGGCATTCCAGAGTCATC
<i>Bmpr2</i>	TTGGGATAGGTGAGAGTCGAAT	TGTTTACAAGATTGATGTCCCC
<i>Smad5</i>	TTGTTCAGAGTAGGAAGTCAAC	GAAGCTGAGCAAACCTCTGAT
<i>CD34</i>	GGTAGCTCTTGCCTGATGAG	TGGTAGGAAGTATGGGGATATT
<i>Zic1</i>	CAGTATCCCGCGATTGGTGT	GCGAACTGGGGTTGAGCTT
<i>Itgb1(CD29)</i>	ACTGTGATGCCGTATATTAGCAC	GATATGCGTTGCTGACCAACA
<i>Ncam1 (CD56)</i>	ACCACCGTCACTACTAATCT	TGGGGCAATACTGGAGGTCA
<i>Vcam</i>	AGTTGGGGATTTCGGTTGTTCT	CCCCTCATTCTTACCACCC
<i>Tbp</i>	ACCCTTCAACCAATGACTCCTATG	TGACTGCAGCAAATCGCTTGG
<i>18s</i>	AGTCCCTGCCCTTTGTACACA	CGATCCGAGGGCCTCACT
<i>36B4</i>	TCCAGGCTTTGGGCATCA	CTTTATCAGCTGCACATCACTCAGA

## Uncropped images of WBs

**a** Western blot films in Extend. Figure 7c



**b** Western blot films in Extend. Figure 7f

