### Supporting Information Table S1

#### Genotyping primers

| Primer Name         | Primer Sequence                      |
|---------------------|--------------------------------------|
| Lbx1_Cre_fw        | CGCCCTCCTCTCGCACCCGTC               |
| Lbx1_Cre_rev       | GCGACCCGGGACGCA                     |
| Myf5_Cre_fw        | CGTACGCGCTGAGAAGGGTCAACCA           |
| Myf5_Cre_KO_rev    | ACGAAGTCTAGGATGCTCCGAC              |
| Myf5_Cre_WT_rev    | CACATTAGAAACCTGGCAACACC             |
| Nf1_P1             | CTTCAGACTGATTGTTGTACCTGA            |
| Nf1_P2             | CATCTGCTGCCCTTAGAGGAACA             |
| Nf1_P3             | ACCTCTAGCTGGAGAATGTA               |
| Nf1_P4             | TGATTCCCACATTGTGTTCTAA             |
| Unspecific_Cre_fw  | GAGTGATGAGGGTCCGCAAGA               |
| Unspecific_Cre_rev | CTACACCAGAGACGGAAATC                |

#### Rt-PCR primers

| Primer Name         | Primer Sequence                      |
|---------------------|--------------------------------------|
| Myf5_fw             | TGAGGGGAAACAGTGAGGAGA               |
| Myf5_rev            | CTGTGCTTTCGGAGACGAGA                |
| Nf1_fw              | ACAGAAAGGTATTGCA                     |
| Nf1_rev             | GCTTACGCCAGATTGCTGGA                |
| Myh2-fw             | ACCCTGCAAGTAGAGACAGA                |
| Myh2_rev            | TACACCGGACCCCATGGTA                 |
| Myh4-fw             | CAGAGTCACCTCCAGCTCA                 |
| Myh4_rev            | TGATTTACCTGACTGACTG                 |
| Myh7-fw             | CCAAGGCGCTCCGAGCA                   |
| Myh7_rev            | CGAGAAAGGAGAAGCTGTG                 |
| Pparg-fw            | TCAGCCGGAAGACTTATG                  |
| Pparg_rev           | AACCACACACACAGAGACTAC              |
| Pgc1_a-fw           | AGTTGCTAGCATGACACAGA                |
| Pgc1_a_rev          | TCTTTCGCTATGCTCCAT                 |
| Fabp3-fw            | CTTGACCTCCGGTCTACGTC               |
| Fabp3_rev           | CTTTGCACCAAGAGAAAGTGW              |
| Fabp4-fw            | GTCGTCGTCGCGGTATTCTA               |
| Acad1-fw            | GTAGGTTATGAAATGCTGGAAC              |
| Acad1_rev           | GCTTTCGCTAAGCTTTTCATT              |
| Cpt2-fw             | GCTGCTTACCTCTAATACCT               |
| Cpt2_rev            | CAAGGGTCTTCTAAATAC                |
| Cpt1b-fw            | TCTGTGCTGCTGCTGCTG                 |
| Cpt1b_rev           | CATCGGGTAGATCGGAGGCG               |
| ldh3a-fw            | TCTGGGATAGATGGAGGTG                |
| ldh3a_rev           | ATGGAGCTTCTGGTCTTG                 |
| Lpl-fw              | TCATCTATTCCTGGATTAGCA              |
| Lpl_rev             | GGCCCGATACAACAGACTCA               |
| Il6-fw              | TGAACAAAGGAGATGCTACTTG             |
| Il6_rev             | TCATCTGAGGAGACCGCTG               |
| Fgt21-fw            | ACCTGGAATGCAGGGAGGAT               |
| Fgt21_rev           | GAGAGCTCCTACCTGGTCTGG              |
| Fgt23-fw            | TACAGCCAGGACCACTAC                 |
| Fgt23_rev           | TGGCTGTCTATCACCACA                  |
| Gene          | Forward Primer             | Reverse Primer            |
|---------------|----------------------------|---------------------------|
| Fgf15         | CGCTACTCGGAGGAAGACTG       | TTGGCCTGGATGAAGATGAT      |
| Adipoq        | GGAGATGGTTGGAAATGACAGGA    | CGAATGGGTACATTGGGAAC      |
| Gapdh         | AACTTTGGCATTTGGAAGG        | CAGTCTTCTGGTGGCAGTG       |
| Actb          | CGTGAAGAATGAGCCAGATCA      | GGGACAGCAGCCCTGGAT        |
| 4ebp1         | GGGGACTACAGGACACTCC        | ATCGCTTTAGGGCTAGTG        |
| Ctsl          | TTAGTGCAAGAGTCACCAG        | CCCGCACTACAGGAAGAAT       |
| Psma          | CGGTGTGTAGCTGGATCATT       | GACGAGACACAGAAATGTGC      |
| Fbxo32        | TGAAGTTTTGTTGCGGATG        | CGCCATGGAATGACTTTT        |
| Trim63        | ACTGCATCTCCATGCTGT         | CAGCTCGCTCTTTCCTCGT       |
| Gabarapl1     | TCGGGAGAACGCTCTAAA         | CCCACATTCCAAACAAAGAT      |
| Nfe2l2        | GAGGCGCATGAAGACTGAA        | ACCAGCTTGATCAATTTGATGA    |
| Ucp1          | GTGAGAATGCGAAGCCAGAG       | ACCAGCTCTGTGATCAATTTGATGA |
| Sod1          | AAGCGGTGAACACCAGTTG        | CCCAGGATACGGTCATGCA       |
| Cs            | GCAAACCTCGCTGACAGGAA       | TCCAATGCTGGAGGATAA        |
| mtCO1         | ACCATGAAACCCAGCCATA        | GAGGGGACACAAATGGGCAA      |
| Pnpla2        | CGTAGATGTGAGTCGGTTG        | CATGCTATCCCAAGCTG         |
| Dgat2         | CAAATTTGCTCTTGTGATTG       | TCGCTGGAGAAGGAACCACTG     |
| Cd36          | TTGTTCTTTTGGCAAGTTCATCT    | TCACAGCTGCCAAATGGTGG      |
| Plin1         | TCTCGAAGCGGGGTAGAGAT       | CTTGCAGAGATGACAGTC        |
| Lipe          | CGGAAACACCTGGCAAGACAT      |