

Table S1. Primers used in this study

| Primers | Sequences | Purpose |
|---------------|--|---------------------|
| <i>DcGSK3</i> | F: ATGCAAATTATGAGACGGCT R: CTAAGCCATGTCATTGGCTC | ORF amplify |
| <i>DcGSK3</i> | F: CCCCTCTGTTCAACTTCACCG R: CGTGGTTTCCGAGAGGTCTGTAG | |
| <i>GAPDH</i> | F: CATGGCAAGTTCAACGGTGA R: CGATGCCTTCTCAATGGTGG | |
| <i>TPS1</i> | F: GACATTTTCCGACTTTTCCCC R: TTGCGGTCTACACGACAGCC | |
| <i>Tre1-1</i> | F: AAATCATCACCAAGGACAATCAA R: GAAGAGCCACTTTTCAGCCAG | RT-qPCR analysis |
| <i>Tre1-2</i> | F: AAGCCAATGCTGGGAATCG R: GGTCTGTGAAATCAGGGGGG | |
| <i>Tre2</i> | F: CAAGGAATGGTTGGAGGCTGT R: GCGGAGATAGGTTACTGGGGT | |
| <i>HK</i> | F: GACTTTCTGGCGGCGTGTATC R: TGGTTGTCTTGTCTGTGTGA | |
| <i>G6PI</i> | F: TGCTGTGGGACCAAGAGTTCAT R: ACTTTGCCCCGATTTGTAGATAG | |
| <i>GFAT</i> | F: TGAGCATTACAGACTCCGCA R: GCGGATTTGCGGAATGTAGTC | |
| <i>GNPNA</i> | F: CGATTATGACCACGGGTTCTT R: ACTTCACCAGAACGGCAATCA | |
| <i>PAGM</i> | F: GACAACTCAGGGGAACTCAACT R: GCAATACGGTCTCCATCCAACA | |
| <i>UAP</i> | F: AAGCCTGATGCTGTAGGAAATG R: GCACAAGGAATGAATGACCAAT | |
| <i>CHT</i> | F: CGTGTATGCCTTTGCCGAT R: TCCTTGAGTCTGACCAACCACC | |
| <i>NAG</i> | F: GTGGGAGTGGATGTGTTCCG R: GCTTCAACTTGGACCAGAATAAAA | |
| <i>ACC</i> | F: CCTTCCCGTGTCCACTCCTTA R: TACGAAGTTGAGGACCTGAGCA | |
| <i>FAS</i> | F: GAAGGTTATCCCCTCTCCAAG R: CAGGAGGTTGTTGGTGTGGTATT | |
| <i>MCAD</i> | F: CTGTTCAAGGTGTTTGGAGGCA R: GGGTTACTTTGGTATGTTGGGG | |
| <i>GCD</i> | F: GGACCAGATGCTCCTTCTTGCTA R: AGTTGTGGGATTTGGTTGGC | |
| <i>ACAT</i> | F: CAGAAGGGAGTTGCCTCTATTTG R: CGATAAACCAAAAGTGTCTCTCC | |
| <i>Lipase</i> | F: CCCAACAGGATTCCGTGACTAA R: GAACGGTCACATTACCAATAGGG | |

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|-----------------|---|-----------|
| <i>FAB</i> | F: TCTGATTACTCGCAAGGTGGG R: ACGCTCTTCACCTTACGACCG | |
| <i>FAR2</i> | F: ACGCTCTTCACCTTACGACCG R: AATAGGACGAACACGGCAACC | |
| <i>FAR1</i> | F: GAACGCTTCCATAAAGACCCA R: TTGACTCCTTCTTTTAGGGATTG | |
| <i>ELOVL7</i> | F: CAGTCGTCAAAGTGGTTTTAGAGC R: AGGGCAGTGATTGATTGTTCTT | |
| <i>ELOVL6</i> | F: CTCTGAGGAAGGCTTTGATTGTC R: AGGCATACCAGGTGTAGAGGAGC | |
| <i>FA2H</i> | F: TACATTGGGTATGGACGGGTTAG R: GAGGAGAGTTGTCTGGAGGCTT | |
| <i>Lipase 3</i> | F: TACATTGGGTATGGACGGGTTAG R: AGGAGAGTTGTCTGGAGGCTTC | |
| <i>ELOVL1</i> | F: TCCGCCTATTTACCGCCCT R: GGTCCCGCATACAACACGAT | |
| <i>Lipase 1</i> | F: AGGCTATGATGTTTGGTTGTGG R: TGTCGTAGACTCCCATTTCGTG | |
| <i>LCFATP4</i> | F: GAAGATGCTGGGTTTGAAGTGC R: ACAAAGATTCCGACAGGGTGGT | |
| <i>ALDH</i> | F: CTCATCATCGGTGCTTGGAAC R: ACAGAGGTAGAGCCCGTGTAGAA | |
| <i>FAAH</i> | F: CCACGGATGATGCTGAAACTG R: ATCGGATGCCACTCCTACAATG | |
| <i>ELOVL4</i> | F: CAGTTCGCAATCATCCTATCCT R: GTAGAAGTTGGCAAAGAGCAGTG | |
| <i>LCFA4</i> | F: CCCC GTGGTGAGATTCTGATT R: ACCATCGCTTTCCTTCTTCGT | |
| <i>LCFA6</i> | F: GGAAAGGAGCCAAAGAATCAAA R: CCAAGCCCAACAGACCAGAT | |
| <i>dsDcGSK3</i> | F: <u>GGATCCTAATACGACTCACTATAGG</u> ATCATCAAAGTCCTCGGCA R: <u>GGATCCTAATACGACTCACTATAGG</u> GTTGAGATTCGGCTGGATG | dsRNA |
| <i>dsGFP</i> | F: <u>GGATCCTAATACGACTCACTATAGG</u> CAGTGCTTCAGCCGCTACCC R: <u>GGATCCTAATACGACTCACTATAGG</u> ACTCCAGCAGGACCATGTGAT | synthesis |

The underline indicates T7 promoter sequence.