*Supplemental table 1:* Primers sequences

| Primer | Sequence |
| --- | --- |
| Acaca | Up ACCTTACTGCCATTCCAT |
| Down CTTCTGTGCCTACTTCCA |
| Acacb | Up CTGAGATGGAGGTGATGAA |
| Down TGGTCGCTTGATGTAGTT |
| Fasn | Up ACTCATCCGTTCTCTGTATC |
| Down TAATGCCGTTCAGTTCCT |
| Cpt1a | Up GGAGCAGGGATACAGAGAGGAG |
| Down AAAGAGTCAAATGGGAAGGAATG |
| Cpt2 | Up GCCTCCATTCTTCCTCAT |
| Down GACCTCTCACTACCTTCAG |
| Ucp1 | Up AGCAGACATCATCACCTT |
| Down TACAGTTTCGGCAATCCT |
| Ucp2 | Up CTTGCCACTTCACTTCTG |
| Down TATATCTCGTCTTGACCACAT |
| Pck1 | Up CGACAAGTATCTGGAGGA |
| Down GGATTACATCTGGCTGATTC |
| Srebf1 | Up GGAGCCATGGATTGCACATT |
| Down CCTGTCTCACCCCCAGCATA |
| Probe  CAGCTCATCAACAACCAAGACAGTGACTTCC |
| NPY | Up TTTTCCTAGTTTCCCCCCACAT |
| Down CCTGGTGGTGGCATGCAT |
| POMC | Up AGGCCTTTCCCCTAGAGTTCAA |
| Down GTCGGCCTTCTCGGTATCC |