**Supplementary Table 1. List of primers used for the expression of genes quantified in placental endocrine zone and fetal brain (Fw: forward 5′-3′; Rv: reverse 3′-5′).**

|  |  |
| --- | --- |
| **Gene name** | **Primer sequences** |
| *Gapdh* | Fw: CCTTCCGTGTTCCTACCCC  Rv: CCTGCTTCACCACCTTCTTG |
| *Ywhaz* | Fw: AAACAGCTTTCGATGAAGCCA  Rv: CATCTCCTTGGGTATCCGATGT |
| *Actb* | Fw: GGCTGTATTCCCCTCCATCG  Rv: CCAGTTGGTAACAATGCCATGT |
| *Igf2* | Fw: CTTGTTGACACGCTTCAGTTTG  Rv:GGGTGGCACAGTATGTCTCC |
| *H19* | Fw: CATTCTAGGCTGGGGTCAAA  Rv: GCCCTTCTTTTCCATTCTCC |
| *Hsd3b1* | Fw: GTCATTCCCAGGCAGACCAT  Rv: CTGTTCCTCGTGGCCATTCA |
| *Stard1* | Fw: TCCTCGCTACGTTCAAGCTG  Rv: CGTCGAACTTGACCCATCCA |
| *Cyp11a1* | Fw: GTCGAGATCCGGGCTTCTTT  Rv: GTCATCTCCAGCTCCGCAAT |
| *Cyp17a1* | Fw: TGGAGGCCACTATCCGAGAA  Rv: CACATGTGTGTCCTTCGGGA |
| *Prl3a1* | Fw: TGGCTCAGTACATCTCAAACCT  Rv: TTGTTCAGTGCTTGCAGGAG |
| *Prl3b1* | Fw: GGCTGCTCTTCCACATGTACC  Rv: TCACTTGCAACAGCTCCTGG |
| *Prl8a1* | Fw: ACAGATGAGGAAGGCTGCAT  Rv: TGTGTGAAGTGTCTGGAAGAGA |
| *Psg17* | Fw: CAGGTGTACTCCTCTCTTTTCATCT  Rv: TGCTCCTTTGTACCAGGTAAGT |
| *Psg18* | Fw: ACACCCTACGAACTCTGACTC  Rv: TGTCACAGCACAAGGAATGG |
| *Psg19* | Fw: GGACATCGGATTCTACACCCT  Rv: GGACAGAGTTGAAAGCGTCA |
| *Psg21* | Fw: ACGTCCACATTTCTTCAGGTC  Rv: CGTCCTCCTTCAGCAACTCT |
| *Ier3* | Fw: GATGGCGAACAGGAGAAAGAG  Rv: GCGCGTTTGAACACTTCTC |
| *Klf2* | Fw: CTTCCAGCCGCATCCTTC  Rv: GCAAGACCTACACCAAGAGC |
| *Egr1* | Fw: GATAACTCGTCTCCACCATCG  Rv: AGCGCCTTCAATCCTCAAG |
| *Ms4a7* | Fw: GTTCTCCCAGGAGCAGAGTG  Rv: GCCAGGGATGCTGTCCTC |
| *Ccr1* | Fw: TACTCTGGAAACACAGACTCACT  Rv: ACAGCAGTCTTTTGGCATGG |
| *Mrc1* | Fw: TTCAGCTATTGGACGCGAGG  Rv: GAATCTGACACCCAGCGGAA |
| *Plxna3* | Fw: TAACACATGCCAGGGCAAGAA  Rv: TGTCTGGCTTGGGGAATCAC |
| *Slit1* | Fw: TAGCATGCACTCACACCTGG  Rv: CTGCTCCCCGGATATGAACC |
| *Gabra1* | Fw: ATGTTCTAGCAGGGAAGCGAG  Rv: GAGGGCTGTCCATAGCTTCTTC |
| *Sv2b* | Fw: ACAGGCTCCGTTTAAAGGCTAT  Rv: AGGCTTGTGCTGGGAGTAAC |
| *Gabrg1* | Fw: AAACAAGACTTCGGCTTCCCC  Rv: GCCCTCCAAACACTGGTAGC |
| *Gabrg2* | Fw: CGGGCATGAATAAAATGACGCT  Rv: TTTTGGCTTGTGAAGCCTGG |
| *Lrrc4c* | Fw: TGCTGTTGCTGAAGGATCAA  Rv: ACACTTCATTTGGTTTCTTCTCAG |
| *Nrcam* | Fw: CGCTGGATGTTCCTCTCGAT  Rv: AGTCCAGGAAAAGCTTGGGG |
| *Cd9* | Fw: GCTGGGATTGTTCTTCGGGT  Rv: GGGTTCATCCTTGCTCCGTA |
| *Prlr1* | Fw: GGATTTTACACGGGGCTCAGG  Rv: CAATAGATCAGAGGCTCCCTTCAG |
| *Ascl2* | Fw: GAGCAGGAGCTGCTTGACTT  Rv: CAGTCAGCACTTGGCATTTG |
| *Tfap2c* | Fw: CCTGCTCAGCTCCACGTC  Rv: CCTCCATTTTTGGACTTTGC |
| *Peg3* | Fw: AGCACATCCCACTGTACGAA  Rv: TCTGCATTTGACCCCTGGAT |
| *Igf1r* | Fw: GTGGGGGCTCGTGTTTCTC  Rv: GATCACCGTGCAGTTTTCCA |
| *Igf2r* | Fw: CCAGTTATGCCTGCCCAGAA  Rv: GGCCGACACACATTGAGGTA |
| *Slc2a1* | Fw: GCTTATGGGCTTCTCCAAACT  Rv: GGTGACACCTCTCCCACATAC |
| *Slc2a3* | Fw: GATCGGCTCTTTCCAGTTTG  Rv: CAATCATGCCACCAACAGAG |

**Supplemetary Table 2. List of litters with the number of fetuses and presence or absence of LGA (large for gestational age) and SGA (small for gestational age)**

|  |  |  |  |
| --- | --- | --- | --- |
| Litter  ID | Total litter size | Number of LGA | Number of SGA |
| 1 | 7 | 0 | 2 |
| 2 | 10 | 6 | 1 |
| 3 | 8 | 0 | 0 |
| 4 | 8 | 4 | 0 |
| 5 | 10 | 0 | 0 |
| 6 | 7 | 0 | 1 |
| 7 | 9 | 1 | 0 |
| 8 | 8 | 0 | 0 |
| 9 | 6 (one fetus was found dead) | 0 | 2 |
| 10 | 11 | 0 | 3 |
| 11 | 7 | 0 | 0 |

**Supplementary Table 3. Comparison of LGA (large for gestational age) and SGA (small for gestational age) based on the number of fetuses per litter.** Statistical analysis performed by Student t-test or Mann-Whitney test based on the normality of the variable assessed by the Shapiro Wilk test. \*P<0.05, \*\*P<0.01, NS not significant.

|  |  |  |  |
| --- | --- | --- | --- |
| **Large for gestational age fetuses (LGA)** | | | |
|  | **LGA in litters of**  **6-8 fetuses**  (N=5) | **LGA in litters of**  **9-11 fetuses**  (N=6) | **P value** |
| **Fetal weight (mg)** | 428±9.21 | 414±2.20 | NS |
| **Placental weight (mg)** | 115±11.1 | 100±17.7 | NS |
| **F:P ratio** | 3.76±0.21 | 4.27±0.37 | NS |
| **Brain weight (mg)** | 34.9±0.61 | 37.8±1.09 | 0.050 |
| **Brain ratio (%)** | 8.18±0.10 | 9.13±0.22 | \*\* |
| **Brain:Placenta ratio** | 30.7±1.48 | 42±4.31 | \* |
| **Small for gestational age fetuses (SGA)** | | | |
|  | **SGA in litters of**  **6-8 fetuses**  (N=5) | **SGA in litters of**  **9-11 fetuses**  (N=4) | **P value** |
| **Fetal weight (mg)** | 302±17.5 | 296±11.6 | NS |
| **Placental weight (mg)** | 102±4.76 | 96.3±2.57 | NS |
| **F:P ratio** | 2.97±0.12 | 3.08±0.11 | NS |
| **Brain weight (mg)** | 32.3±7.28 | 28.6±3.67 | NS |
| **Brain ratio (%)** | 9.10±2.02 | 9.63±1.15 | NS |
| **Brain:Placenta ratio** | 26.2±5.07 | 30±4.57 | NS |