

Supplementary Table S1. Mean body weight (BW) and average daily gain (ADG) of the animals included in each group for lactation and nursery periods. Each mean is followed by its

| Group | Fast Fast | Fast Slow | Slow Fast | Slow Slow | DF | F value | P-value |
|--------------------|----------------|-----------------|-----------------|----------------|----|---------|---------|
| Lactation ADG, g/d | 246 ± 5.2 a | 244 ± 4.6 a | 148 ± 3.3 b | 138 ± 5.9 b | 71 | 151.4 | < 0.001 |
| Nursery ADG, g/d | 273 ± 7.1 a | 128 ± 3.7 c | 238 ± 5.7 b | 112 ± 3.5 d | 71 | 203.5 | < 0.001 |
| Birth BW, kg | 1.45 ± 0.026 a | 1.31 ± 0.069 ab | 1.35 ± 0.074 ab | 1.21 ± 0.056 b | 71 | 2.904 | 0.040 |
| Lactation BW, kg | 6.7 ± 0.083 a | 6.4 ± 0.094 a | 4.5 ± 0.105 b | 4.1 ± 0.112 b | 71 | 123.6 | < 0.001 |
| Nursery BW, kg | 17.9 ± 0.330 a | 11.7 ± 0.196 c | 14.2 ± 0.306 b | 8.7 ± 0.170 d | 71 | 215.1 | < 0.001 |

Fast_Fast: Pigs showing fast growth during lactation and nursery periods.

Fast_Slow: Pigs showing fast growth during lactation period and slow growth during nursery period.

Slow_Fast: Pigs showing slow growth during lactation period and fast growth during nursery period.

Slow_Slow: Pigs showing slow growth during lactation and nursery periods.

DF: Degrees of freedom.

a,b,c,d Values with different letter in the same column are significantly different according to ANOVA and Tukey adjust.

Supplementary Table S2. Hair glucocorticoid concentration, alpha diversity and SCFA concentration for each sex, lactation growth group and nursery growth group.

| Item | Lactation growth | | | Nursery growth | | | Sex | | | DF | F value | | | Sex | P value | | |
|-------------------------------|------------------|-------|--------|----------------|--------|--------|---------|-------|--------|----|------------------|----------------|----------------------------|------|------------------|----------------|----------------------------|
| | Fast | Slow | SEM | Fast | Slow | SEM | Females | Males | SEM | | Lactation growth | Nursery growth | Lactation x nursery growth | | Lactation growth | Nursery growth | Lactation x nursery growth |
| Cortisol, pg/mg | 18.3 | 19.7 | 0.74 | 19.7 | 152.9 | 0.388 | 19.1 | 18.8 | 0.77 | 68 | 2.29 | 0.54 | 0.03 | 0.52 | 0.130 | 0.463 | 0.852 |
| Cortisone, pg/mg | 140 | 109.6 | 22.3 | 18.200 | 98.900 | 0.6020 | 135 | 118 | 22.8 | 53 | 0.95 | 4.18 | 1.85 | 0.47 | 0.329 | 0.041 | 0.174 |
| Cortisol/cortisone | 0.40 | 0.62 | 0.115 | 0.74 | 23.40 | 0.110 | 0.48 | 0.51 | 0.112 | 53 | 1.46 | 3.30 | 2.00 | 0.40 | 0.227 | 0.069 | 0.157 |
| Observed OTUs | 354 | 343 | 14.9 | 353 | 345 | 15.1 | 346 | 352 | 15.2 | 64 | 0.95 | 0.00 | 0.40 | 1.26 | 0.330 | 0.969 | 0.526 |
| Eveness | 0.786 | 0.781 | 0.0078 | 0.797 | 0.770 | 0.0074 | 0.778 | 0.790 | 0.0075 | 64 | 0.33 | 5.79 | 0.00 | 0.97 | 0.604 | 0.018 | 0.959 |
| Shannon | 6.63 | 6.55 | 0.109 | 6.72 | 6.46 | 0.105 | 6.55 | 6.64 | 0.107 | 64 | 0.76 | 2.32 | 0.01 | 0.69 | 0.411 | 0.137 | 0.929 |
| Total SCFA, $\mu\text{mol/g}$ | 84.02 | 75.54 | 2.970 | 79.68 | 80.35 | 2.930 | 80.2 | 79.8 | 2.98 | 63 | 4.63 | 0.03 | 1.03 | 0.00 | 0.031 | 0.864 | 0.310 |
| Acetate, $\mu\text{mol/g}$ | 47.33 | 42.39 | 1.848 | 43.56 | 46.17 | 1.823 | 45.5 | 44.5 | 1.86 | 63 | 3.85 | 0.95 | 1.43 | 0.07 | 0.049 | 0.331 | 0.231 |
| Butyrate, $\mu\text{mol/g}$ | 10.20 | 8.05 | 0.589 | 9.67 | 8.58 | 0.581 | 9.0 | 9.3 | 0.60 | 63 | 7.53 | 5.86 | 0.00 | 0.14 | 0.006 | 0.017 | 0.964 |

DF: Degrees of freedom of the statistical test.