**Table S1.** Composition and nutrient levels of basal diets for sows (air-dry basis; %)

| Items | Pregnant diet | Lactating diet |
|---|---|---|
| Ingredients | | |
| Corn | 37.50 | 66.00 |
| Soybean meal | 9.50 | 25.00 |
| Wheat bran | 14.00 | 5.00 |
| Barley | 25.00 | |
| Soybean hull | 10.00 | |
| Pregnant premix[1)] | 4.00 | |
| Lactating premix[2)] | | 4.00 |
| Total | 100.00 | 100.00 |
| Nutrient levels[3)] | | |
| Digestible energy (MJ/Kg) | 12.55 | 13.87 |
| Crude protein | 12.82 | 16.30 |
| Crude fiber | 4.56 | 2.87 |
| SID[4)] Lys | 0.48 | 0.75 |
| SID Met+ Cys | 0.43 | 0.51 |
| SID Thr | 0.37 | 0.53 |
| SID Trp | 0.13 | 0.17 |
| Calcium | 0.62 | 0.65 |
| Phosphorus | 0.47 | 0.50 |

[1)] Pregnant premix provided the following per kg of diet: $CaHPO_4 \cdot 2H_2O$ 10 g, NaCl 4 g, $CuSO_4 \cdot 5H_2O$ 80 mg, $FeSO_4 \cdot H_2O$ 360 mg, $ZnSO_4 \cdot H_2O$ 240 mg, $MnSO_4 \cdot H_2O$ 100 mg, $MgSO_4 7H_2O$ 1 g, 1% ICl 50 mg, 1% $Na_2SeO_3$ 36 mg, 1% $CoCl_2$ 16 mg, $NaHCO_3$ 1.4 g, VA 10 000 IU, $VD_3$ 1 800 IU, VE 20 mg, $VK_3$ 2.4 mg, $VB_1$ 1.6 mg, $VB_2$ 6 mg, $VB_6$ 1.6 mg, $VB_{12}$ 0.024 mg, folic acid 1.2 mg, nicotinamide 20 mg, pantothenic acid 12 mg, biotin 0.12 mg, ferrous glycinate 100 mg, choline chloride 1g, phytase 200 mg, fruity 80 mg, and limestone 12 g.

[2)] Lactating premix provided the following per kg of the diet: $CaHPO_4 \cdot 2H_2O$ 10 g, NaCl 4 g, $CuSO_4 \cdot 5H_2O$ 80 mg, $FeSO_4 \cdot H_2O$ 360 mg, $ZnSO_4 \cdot H_2O$ 240 mg, $MnSO_4 \cdot H_2O$ 100 mg, 1% ICl 50 mg, 1% $Na_2SeO_3$ 36 mg, 1% $CoCl_2$ 16 mg, $NaHCO_3$ 1.4 g, VA 10 000 IU, $VD_3$ 1 800 IU, VE 20 mg, $VK_3$ 2.4 mg, $VB_1$ 1.6 mg, $VB_2$ 6 mg, $VB_6$ 1.6 mg, $VB_{12}$ 0.024 mg, folic acid 1.2 mg, nicotinamide 20 mg, pantothenic acid 12 mg, biotin 0.12 mg, Lysine 1.5 g, ferrous glycinate 100 mg, choline chloride 1g, phytase 200 mg, fruity 80 mg, limestone 12 g.

[3)] Nutrient levels were calculated values.

[4)] SID: standard ileum digestible.

**Table S2.** Composition and nutrient levels of basal diets for weaned Bama mini-pigs (air-dry basis; %)

| Items | Prophase diet (35–95 d-old) | Anaphase diet (96–125 d-old) |
|---|---|---|
| Ingredients | | |
| Corn | 54.92 | 58.00 |
| Soybean meal | 22.00 | 18.35 |
| Wheat bran | 10.13 | 11.35 |
| Rice bran | 8.95 | 8.30 |
| Premix[1)] | 4.00 | 4.00 |
| Total | 100.00 | 100.00 |
| Nutrient levels[2)] | | |
| Digestible energy (MJ/kg) | 13.50 | 13.42 |
| Crude protein | 16.13 | 14.90 |
| Calcium | 0.45 | 0.44 |
| Total Phosphorus | 0.49 | 0.49 |
| Lys | 1.40 | 1.30 |
| Met + Cys | 0.69 | 0.66 |
| Thr | 0.78 | 0.74 |

[1)] Premix provided the following per kilogram of diets: enzyme preparation (including phytase, protease, and lipase) 1.2 g, VA 26 000 IU, $VD_3$ 10 000 IU, VE 70 IU, $VK_3$ 10 mg, $VB_1$ 10 mg, $VB_2$ 25 mg, $VB_6$ 10 mg, $VB_{12}$ 0.075 mg, biotin 0.4 mg, folic acid 5 mg, nicotinamide 100 mg, pantothenic 50 mg, choline 1600 mg, flavoring agent 500 mg, edulcorant 300 mg, acidulating agent 5 g, $CuSO_4 \cdot 5H_2O$ 898 mg, $MnSO_4 \cdot H_2O$ 298 mg, $ZnSO_4 \cdot H_2O$ 600 mg, $FeSO_4 \cdot H_2O$ 501 mg, $Ca(IO_3)_2$ 0.9 mg, as $Na_2SeO_3$ 0.7 mg, $CoSO_4 \cdot H_2O$ 1.2 mg, glucose 2.1 g, antioxidants 0.4 g, anti-mildew agent 1 g, Ca (as $CaHPO_4$ and $CaCO_3$) 3.42 g, and P (as $CaHPO_4$ ) 1.155 g.

[2)] Nutrient levels were calculated values.

**Table S3.** Primers sequences used for real time-PCR

| Genes | GenBank ID | Sequence (5′-3′) | Size (bp) |
|---|---|---|---|
| *β-actin* | XM_021086047.1 | F: GGCACCACACCTTCTACAACGAG | 102 |
| | | R: TCATCTTCTCACGGTTGGCTTTGG | |
| *MyHCI* | NM_213855.2 | F: CTGTCCAAGTTCCGCAAGGT | 176 |
| | | R: CTTTGTTGCGCCCTCAGGAT | |
| *MyHCIIa* | NM_214136.1 | F: GGACCCCCTGAATGACACAG | 149 |
| | | R: CGGTCTGGAAGGAAGAACCC | |
| *MyHCIIx* | NM_001104951.2 | F: TGAGGAAGACCGCAAGAACA | 272 |
| | | R: GGTCACTTTTGAGCATTTGGATG | |
| *MyHCIIb* | NM_001123141.1 | F: AGGAGCATCAGCGCCTAATC | 119 |
| | | R: TCGGGATAGCTGAGACACCA | |
| *MyoD* | NM_001002824.1 | F: CTATGATGACCCGTGTTTCG | 101 |
| | | R: AGTGTTCCTCGGGCTTTAGG | |
| *Myf5* | NM_001278775.1 | F: GGATCAGCAACTCCGAGCAACC | 126 |
| | | R: GCACATGGTAGATGAGCCTGGAAC | |
| *Myf6* | NM_001244672.1 | F: GCTCGTGATGACTGCCAAGGAAG | 80 |
| | | R: CGATGGAAGAAAGGCACCGAAGG | |
| *MyoG* | NM_001012406.1 | F: AAACTACCTGCCCGTCCACCTC | 112 |
| | | R: GGTCCCCAGCCCCTTATCTTCC | |
| *IGF*1 | NM_214256.1 | F: GACGCTCTTCAGTTCGTGTG | 141 |
| | | R: CTCCAGCCTCCTCAGATCAC | |
| *FBOX32* | NM_001044588.1 | F: AAGGGAACTCCTCCAGACC | 104 |
| | | R: CCATCCGATACACCCACAT | |
| *MSTN* | NM_214435.2 | F: GCACCAAGCAAACCCCAGAGG | 143 |
| | | R: AGCACCCACAGCGATCTACTACC | |

Note: *MyHCI*, myosin heavy chain I; *MyHCIIa*, myosin heavy chain IIa; *MyHCIIb*, myosin heavy chain IIb; *MyHCIIx*, myosin heavy chain IIx; *MyoD*, myogenic differentiation factor; *MyoG*, myogenin; *Myf5*, myogenic factor 5; *Myf6*, myogenic factor 6; *IGF-1*, insulin-like growth factor-1; *FBOX32*, muscle atrophy Fbox-1 protein; *MSTN*, myostatin.