animals

MDPI

Supplementary Materials

Table S1. Effects of dietary standardized ileal digestible lysine to net energy ratio on growth performance of finishing pigs.

Items	HR	LR	*P*-value
65-90 kg			
ADG, kg [1]	1.13±0.05	1.11±0.04	0.697
ADFI, kg [2]	3.31±0.15	3.11±0.06	0.31
F:G [3]	2.922±0.038	2.820±0.084	0.316
90-110 kg			
ADG, kg	1.09±0.05	1.03±0.03	0.355
ADFI, kg	3.58±0.15	3.21±0.06	0.088
F:G	3.280±0.008	3.113±0.084	0.229
65-110 kg			
ADG, kg	1.11±0.05	1.08±0.02	0.506
ADFI, kg	3.42±0.15	3.15±0.05	0.167
F:G	3.067±0.023	2.931±0.063	0.112

Note: [1] ADG: average daily gain. [2] ADFI: average daily feed intake. [3] F:G: the ratio of feed to gain.

Table S2. Primers used for real-time PCR analyzing.

Genes	Primers	Sequences (5′-3′)	Length (bp)	Accession number
AMPKα1	Forward	TTGACTCGGCCCCATCCT	65	NM_001167633.1
	Reverse	GTATGGCGTGCCCTTGGA		
SIRT1	Forward	GGTTTGAAGAATGTTGCCTG	114	NM_001145750.2
	Reverse	CCGTTTACTAATCTGCTCCT		
PGC-1α	Forward	GCCCAGTCTGCGGCTATTT	265	NM_213963.2
	Reverse	GTTCAGCTCGGCTCGGATTT		
FXR	Forward	TATGAACTCAGGCGAATGCCTGCT	154	NM_001287412.1
	Reverse	ATCCAGATGCTCTGTCTCCGCAAA		
SHP	Forward	TGCTGCCTGGAGTCCTTATG	269	XM_003127720.4
	Reverse	ACAGGGCGAAAGAAGAGGTC		
CYP7A1	Forward	GAAAGAGAGACCACATCTCGG	123	NM_001005352.3
	Reverse	GAATGGTGTTGGCTTGCGAT		
CYP27A1	Forward	ACTGAAGACCGCGATGAAAC	106	NM_001243304.1
	Reverse	CAAAGGCGAATCAGGAAGGG		
CYP8B1	Forward	GCAGGCGGAGGAGTTATTCA	164	NM_214426.1
	Reverse	TTATGCCGTGCCTCTCCAAG		
CYP7B1	Forward	ATGTGAGAAGATGGTTGGGGT	86	XM_021089297.1
	Reverse	CCAATGAAAGGAAGCCAGCTTTT		
PPARα	Forward	CATCCTCGCGGGAAAGG	70	NM_001044526.1
	Reverse	GGCCATACACAGTGTCTCCAT		
FABP4	Forward	TGGAAACTTGTCTCCAGTG	147	NM_001002817.1
	Reverse	GGTACTTTCTGATCTAATGGTG		
CD36	Forward	AACTACCTTCCTTAGACCTCAGA	117	NM_001044622.1
	Reverse	CAATGACAGCACCAGCAATG		
SCD	Forward	TTCCCCAAAGCCTGTTCGTC	170	NM_213781.1
	Reverse	GTGGAAGCCCTCACCCACAG		
ACCα	Forward	GTTTCCAGACTCTGCGTTTAAG	84	NM_001114269.1

	Reverse	CAGTTGGCAAAGACCATTAGAG		
ACCβ	Forward	GTTTGCAGAGGATCGCATTTAC	247	NM_001206399.1
	Reverse	CTCATTCTGCAGGTACTCGAAG		
FATP2	Forward	GGTCGACTCTTTCCTAGACAAA	84	NM_001278777.1
	Reverse	GTGGAAAAGTTAACTTCCGACC		
HSL	Forward	ACCCTCGGCTGTCAACTTCTT	84	NM_214315.3
	Reverse	TCCTCCTTGGTGCTAATCTCGT		
ATGL	Forward	TCACCAACACCAGCATCCA	95	NM_001098605.1
	Reverse	GCACATCTCTCGAAGCACCA		
CPT	Forward	GCATTTGTCCCATCTTTCGT	198	NM_001129805.1
	Reverse	GCACTGGTCCTTCTGGGATA		
GAPDH	Forward	GTCGGAGTGAACGGATTTGGC	150	NM_001206359.1
	Reverse	CTTGCCGTGGGTGGAATCAT		

Note: AMPKα1: AMP-activated protein kinase α1; SIRT1: sirtuin 1; PGC-1α: peroxisome proliferator-activated receptor-γ coactivator-1α; FXR: farnesol X receptor; SHP: small heterodimer partner; CYP7A1: cytochrome P450 family 7 subfamily A member 1; CYP27A1: cytochrome P450 family 27 subfamily A member 1; CYP8B1: cytochrome P450 family 8 subfamily B member 1; CYP7B1：cytochrome P450 family 7 subfamily B member 1；PPARα: peroxisome proliferator-activated receptor family α; FABP4: fatty acid transport protein 4; CD36: fatty acid translocase; SCD: stearoyl-CoA desaturase; ACCα: acetyl-coA carboxylase α; ACCβ: acetyl-coA carboxylase β; FATP2: fatty acid transport protein 2; HSL: hormone-sensitive lipase; ATGL: adipose triglyceride lipase; CPT: carnitine palmitoyl transferase; GAPDH: glyceraldehyde-3-phosphate dehydrogenase.

Table S3. Effects of dietary standardized ileal digestible lysine to net energy ratio on the coefficient of apparent total tract digestibility of nutrients of finishing pigs.

Items	**HR**	**LR**	***P*-value**
65-90 kg			
Dry matter (%)	79.92±0.33	79.22±1.29	0.620
Gross energy (%)	81.38±0.42	80.73±1.20	0.648
Crude protein (%)	80.22±1.02	76.57±1.89	0.114
Ether extract (%)	29.29±1.02	42.27±3.19*	0.006
Ash (%)	29.42±0.76	26.28±3.62	0.432
90-110 kg			
Dry matter (%)	78.02±0.33	79.62±1.56	0.297
Gross energy (%)	79.12±0.27	79.69±1.78	0.729
Crude protein (%)	81.30±0.80	80.32±2.31	0.674
Ether extract (%)	31.11±1.37	46.64±5.39	0.059
Ash (%)	23.77±3.45	32.40±0.91	0.067

Note: * indicates significant difference ($P < 0.05$).

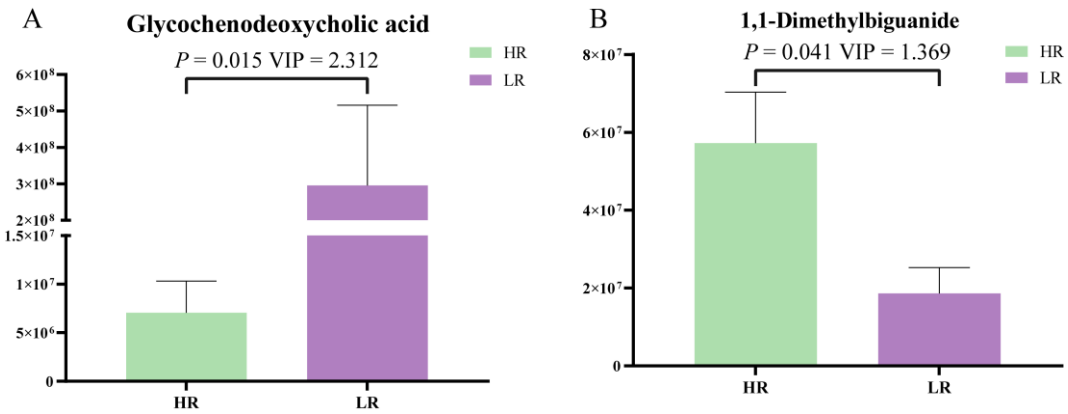


Figure S1. Effects of dietary standardized ileal digestible lysine to net energy ratio on glycochenodeoxycholic acid (A) and 1,1-dimethylbiguanide (B) levels in urine of finishing pigs.