Electronic Supplementary Material (ESI) for RSC Advances.

Supplementary Information

Effects of putrescine on gene expression in relation to physical barrier, antioxidant capacity in organs of weaning piglets

Guangmang Liu,[*a,b,c] Weiwei Mo,[a,b,c] Xiaomei Xu,[a,b,c] Xianjian Wu,[a,b,c] Gang Jia,[a,b,c] Hua Zhao,[a,b,c] Xiaoling Chen,[a,b,c] Caimei Wu[*a,b,c] and Jing Wang[d]

[a]Institute of Animal Nutrition, Sichuan Agricultural University, Chengdu 611130,Sichuan, China

[b]Key Laboratory for Animal Disease-Resistance Nutrition of China Ministry of Education, Chengdu 611130, Sichuan, China

[c]Key laboratory of Animal Disease-resistant Nutrition and Feed, Ministry of Agriculture and Rural Affairs, Chengdu 611130, Sichuan, China

[d]Maize Research Institute, Sichuan Agricultural University, Chengdu 611130, Sichuan, China

Table S1 Primers sequences of target and reference genes selected for analysis by real-time PCR

Genes	Primer	Sequence (5′–3′)	Size,bp	Temperature (°C)	Accession No.
β-actin	Forward	TGCGGGACATCAAGGAGAA	58	58	DQ452569.1
	Reverse	GCCATCTCCTGCTCGAAGTC			
SOD1	Forward	GATCAAGAGAGGCACGTTGGA	62	58	AF396674.1
	Reverse	GTGGCCACACCATCTTTGC			
GPx1	Forward	GGCGGCGGGTTCGA	55	58	NM_214201.1
	Reverse	CGCCATTCACCTCACACTTCT			
CAT	Forward	GGACGTGCAGCGCTTCA	52	58	NM_214
	Reverse	CCGCACCTGGGTGACATTA			
GR	Forward	CAGTAGAGGTCAACGGGAAGAAGT	59	58	AY368271.1
	Reverse	GCCGCCTGTGGCAATC			

GST	Forward	TCCCCACGGTGAAGAAGTTT	57	58	Z69586.1
	Reverse	CGTCAGTGGGAGGCTTCCT			
Nrf2	Forward	GCCCCTGGAAGCGTTAAAC	67	58	XM_003133500.5
	Reverse	GGACTGTATCCCCAGAAGGTTGT			
Keap1	Forward	ACGACGTGGAGACAGAAACGT	56	58	NM_001114671.1
	Reverse	GCTTCGCCGATGCTTCA			
ZO-1	Forward	CCCAACCTCACAAATAGAAAGTGA	70	58	XM_013993251.1
	Reverse	GCGAATAATGCCAGAGCTACGT			
ZO-2	Forward	CGGGTGGTCATGGTTAACG	59	58	NM_001206404.1
	Reverse	TGAACGGCAAAGGAATGGA			
occludin	Forward	CCTCAGGCAGCCTCATTACAG	61	58	NM_001163647.2
	Reverse	GGGAGCCCGTTTTGAAGAC			

Claudin-1	Forward	GCTCCTGCCCCCGAAA	63	58	NM_001244539.1
	Reverse	AAGGCGAAGGTTTTGGATAGG			
Claudin-2	Forward	TCCTCCCTGTTCTCCCTGATAG	59	58	NM_001161638.1
	Reverse	CCTTGCAGTGGGCAGGAA			
claudin -3	Forward	TGGGAGGGCCTGTGGAT	64	58	NM_001160075.1
	Reverse	CGTACACTTTGCACTGCATCTG			
Claudin-12	Forward	GGGCTGTCGGGATGTTCA	57	58	NM_001160079.1
	Reverse	GAGGCGATTCCACACAGGAA			
Claudin-14	Forward	GAAATAAATGCACCCGGATAATCT	92	58	NM_001161642.1
	Reverse	CCGCGGGAGTCCTAATGA			
Claudin 15	Forward	TGCACGGGAACGTCATCA	63	58	NM_001161643.1
	Reverse	CGGTGGCGCAGCTGTAC			
Claudin 16	Forward	TCCTGTTGGCTTGGAATGG	57	58	FJ873105.1
	Reverse	GAGGACAGCACCAGCCAAA			

MLCK	Forward	AAGGCCAACATCGTCATGGT	66	58	XM_021070241.1
	Reverse	GTCAATGATGCGCTCGAACA			

SOD1, superoxide dismutase 1; CAT, catalase; GPX1, glutathione peroxidase 1; GR, glutathione reductase; GST, glutathione S-transferase; Nrf2, nuclear erythroid 2-related factor 2; Keap1, Kelch-like ECH-associatedprotein; ZO-1, zonula occludens 1; ZO-2, zonula occludens 2;MLCK, Myosin light chain kinase