



Supplementary Material

Short Communication

RNA-Seq Reveals Differentially Expressed Genes of Pig Vaccinated with Modified Live Attenuated Porcine Epidemic Diarrhea

Sung Kwon Park¹, Jin Young Jeong², Eun Seok Cho³, Yong Dae Jeong³ and Chang Seok Park^{4*}

¹Department of Food Science and Technology, Sejong University, 209, Neungdong-ro, Gwangjin-gu, Seoul, Republic of Korea

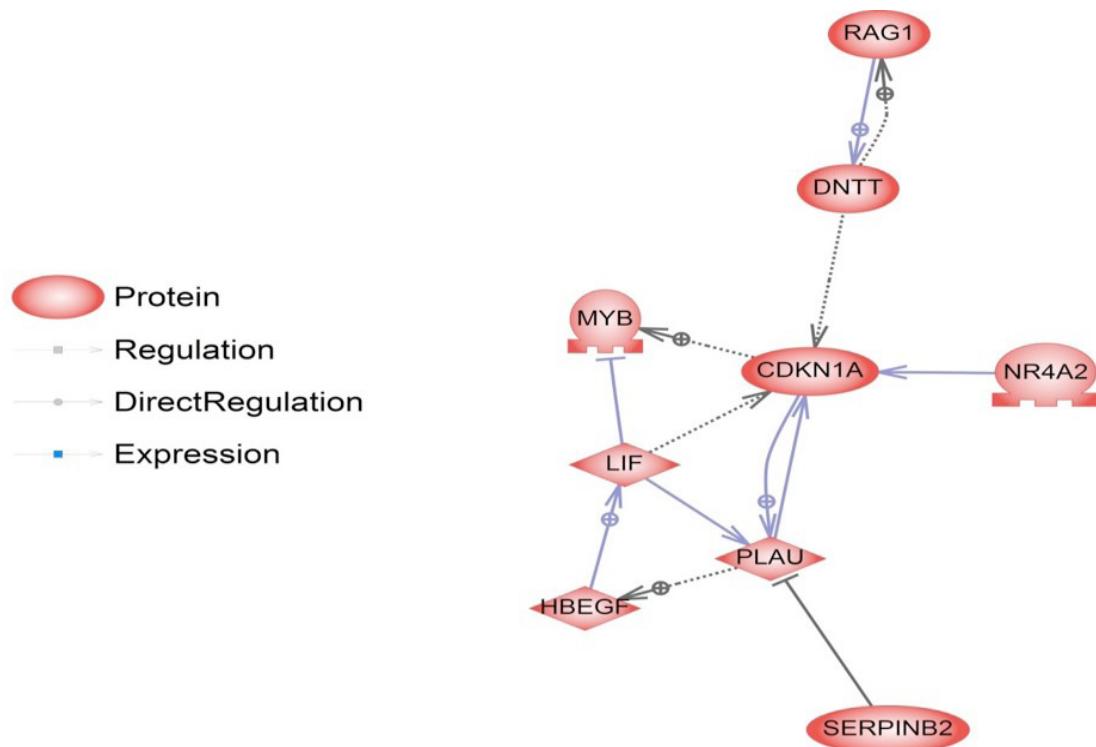
²Animal Nutrition & Physiology Team, National Institute of Animal Science, RDA, 1500, Kongjwipatjwi-ro, Wanju-gun, Jeollabuk-do, 55365, Republic of Korea

³Swine Science Division, Department of Animal Resources Development, National Institute of Animal Science, RDA, Cheonan, Republic of Korea

⁴Hanwoo Research Institute, National Institute of Animal Science, RDA, Pyeongchang 232-950, Republic of Korea

*Sung Kwon Park and Jin Young Jeong contributed equally to this work.

* Corresponding author: phj3578@korea.kr
0030-9923/2017/0003-1107 \$ 9.00/0
Copyright 2017 Zoological Society of Pakistan



Supplementary Fig. 1. Biological pathway analysis of direct gene networks in PBMCs between unvaccinated and PED-vaccinated pigs.

Supplementary Table I.- List of up-regulated genes among the differently expressed gene (DEG) in PBMCs between unvaccinated and PED-vaccinated pigs.

SSC ¹	Start (bp)	End (bp)	Gene	Description	Fold Changes
1	32265792	32302537	MYB	v-myb avian myeloblastosis viral oncogene homolog	2.014
2	26728177	26738216	RAG-1	recombinase activating protein	102.528
3	99312714	99328503	TACSTD1	epithelial cell adhesion molecule	5.637
7	134400748	134401079	75k gamma secalin	Secale cereale 75k gamma secalin (sec) gene	2.147
9	113218491	113229020	U6	snRNA	7.044
13	199061686	199074390	ssc-mir-155	microRNA mir-155	70.761
13	191559144	191562879	ssc-let-7c	microRNA let-7c	16.169
13	34596652	34668851	CELSR3,NCKIPSD	NCK interacting protein with SH3 domain//cadherin, EGF LAG seven-pass G-type receptor 3	5.211
13	22754900	22908342	ARPP21	cAMP-regulated phosphoprotein, 21kDa	5.200
13	85592066	85626043	IL20RB	interleukin 20 receptor beta	3.937
14	117379915	117419194	DNTT	DNA nucleotidylexo transferase	7.780
15	104121460	104263060	COL5A2	collagen, type V, alpha 2	3.962
X	67358312	67535942	ssc-mir-374a	microRNA mir-374a//microRNA mir-374b//microRNA mir-421//microRNA mir-545	23.831

Supplementary Table II.- List of down-regulated genes among the differently expressed gene (DEG) in PBMCs between unvaccinated and PED-vaccinated pigs.

SSC ¹	Start (bp)	End (bp)	Gene	Description	Fold Changes
1	269813346	269852707	NOR-1	neuron-derived orphan receptor-1 alfa	3.524
2	148045530	148058378	HBEGF	heparin-binding EGF-like growth factor	4.335
4	2565796	3021011	TRAPPC9	trafficking protein particle complex 9	2.547
5	36179189	36185575	LYZ	lysozyme	2.403
6	58299022	58304156	VWA1	von Willebrand factor A domain containing 1	6.461
7	37258035	37267368	CDKN1A	cyclin-dependent kinase inhibitor 1A (p21, Cip1)	2.449
7	122215477	122220545	ISG12(A)	putative ISG12(a) protein	2.936
8	139934203	139974969	HERC5	HECT and RLD domain containing E3 ubiquitin protein ligase 5	2.453
9	80762597	80767739	GNG11	guanine nucleotide binding protein (G protein), gamma 11	2.190
9	71613019	71665898	LRRN2	leucine rich repeat neuronal 2	3.719
13	214988180	215014719	MX1	myxovirus (influenza virus) resistance 1, interferon-inducible protein p78 (mouse)	2.014
14	82753207	82761505	PLAU	plasminogen activator, urokinase	2.220
14	55110106	55126603	DGCR8	DiGeorge syndrome critical region gene 8	2.797
15	70670770	70679866	NR4A2	nuclear receptor subfamily 4, group A, member 2	2.018
15	63426229	63437375	PPP1R3B	protein phosphatase 1, regulatory subunit 3B	2.297
17	43299839	43308847	TP53INP2	tumor protein p53 inducible nuclear protein 2	2.122
17	36328313	36349591	SIGLEC1	sialoadhesin	2.186

¹SSC; Sus scrofa chromosomes. $P < 0.001$, q value (FDR) < 0.05 .
n = 5.