

Porcine deltacoronavirus nucleocapsid protein species-specifically suppressed IRF7-induced type I interferon production via ubiquitin-proteasomal degradation pathway

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Figure S1. PDCoV block the porcine type I IFN production. (A, B) LLC-PK1 cells were co-transfected with pIFN- α -Luc and pRL-TK (A), or pIFN- α -Luc and pRL-TK (B) for 12 h, and then mock-infected or infected with PDCoV at MOI of 0.5. After 12 h infection, the cells were mock-infected or infected with VSV-GFP for an additional 12 h to perform dual-luciferase assay. All data are presented as means \pm SD of three independent experiments (** $p < 0.01$).

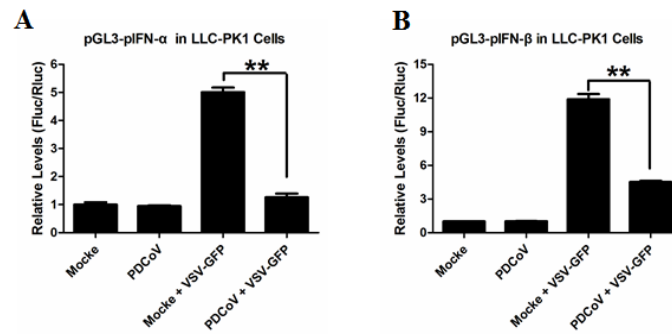


Figure S2. The sequences of porcine IRF7, human IRF7, and chicken IRF7 were analyzed by Multisequence alignment. IRF7 sequences from different species were aligned by Clustal software (*, the lysine was mutated to aspartate in porcine IRF7).

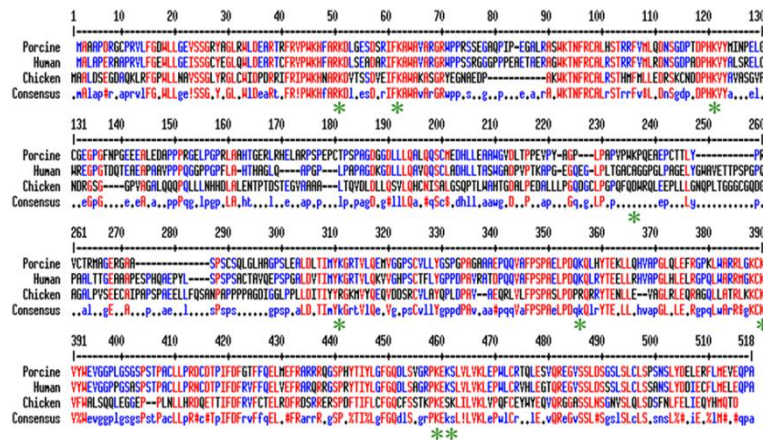


Table S1 The information of deltacoronavirus strains used in this study.

PDCoV strains	The name of PDCoV strain	GenBank
Isolated from China (6 strains)	Porcine deltacoronavirus isolate CHN-AH-2004	KP757890.1
	Porcine coronavirus HKU15 strain HKU15-44	JQ065042.2
	Porcine coronavirus HKU15 strain HKU15-155	JQ065043.2
	Porcine deltacoronavirus isolate CHN-HB-2014	KP757891.1
	PDCoV_CHJXNI2_2015	KR131621.1
	Porcine deltacoronavirus isolate CHN-JS-2014	KP757892.1
Isolated from USA (21 strains)	Porcine deltacoronavirus 8734/USA-IA/2014	KJ567050.1
	PDCoV_USA_Illinois121_2014	KJ481931.1
	PDCoV_USA_Illinois133_2014	KJ601777.1
	PDCoV_USA_Illinois134_2014	KJ601778.1
	PDCoV_USA_Illinois136_2014	KJ601779.1
	PDCoV_USA_Iowa136_2015	KX022602.1
	PDCoV_USA_Minnesota140_2015	KX022603.1
	PDCoV_USA_Nebraska137_2015	KX022602.1
	PDCoV_USA_Nebraska145_2015	KX022605.1
	PDCoV_USA_Ohio137_2014	KJ601780.1
	Porcine coronavirus HKU15 strain IL2768	KJ584355.1
	Porcine coronavirus HKU15 strain IN2847	KJ569769.1
	Porcine coronavirus HKU15 strain KY4813	KJ584357.1
	Porcine coronavirus HKU15 strain MI6148	KJ620016.1
	Porcine coronavirus HKU15 strain Michigan/8977/2014	KM012168.1
	Porcine coronavirus HKU15 strain NE3579	KJ584359.1
	Porcine coronavirus HKU15 strain OH1987	KJ462462.1
	Porcine coronavirus HKU15 strain OH11846	KT381613.1
	Porcine coronavirus HKU15 strain PA3148	KJ584358.1
	Porcine coronavirus HKU15 strain SD3424	KJ584356.1
Swine deltacoronavirus OhioCVM1/2014	KJ769231.1	
Isolated from Thailand (2 strains)	PDCoV_Swine_Thailand_S5011_2015	KU051641.1
	PDCoV_Swine_Thailand_S5015L_2015	KU051649.1
Isolated from Korea (1 strain)	Porcine deltacoronavirus KNU14-04	KM820765.1
Isolated from Laos (1 strain)	P1_16_BTL_0115_PDCoV_2016_Lao	KX118627.1
Isolated from Bird (1 strain)	Sparrow coronavirus HKU17 strain HKU17-6124	JQ065045.1