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Supplemental Information

Prevention of Avian Retrovirus Infection

in Chickens Using CRISPR-Cas9

Delivered by Marek's Disease Virus

Kai Li, Yongzhen Liu, Zengkun Xu, Yu Zhang, Yongxiu Yao, Venugopal Nair, Changjun Liu, Yanping Zhang, Yulong Gao, Xiaole Qi, Hongyu Cui, Li Gao, and Xiaomei Wang

Figure S1

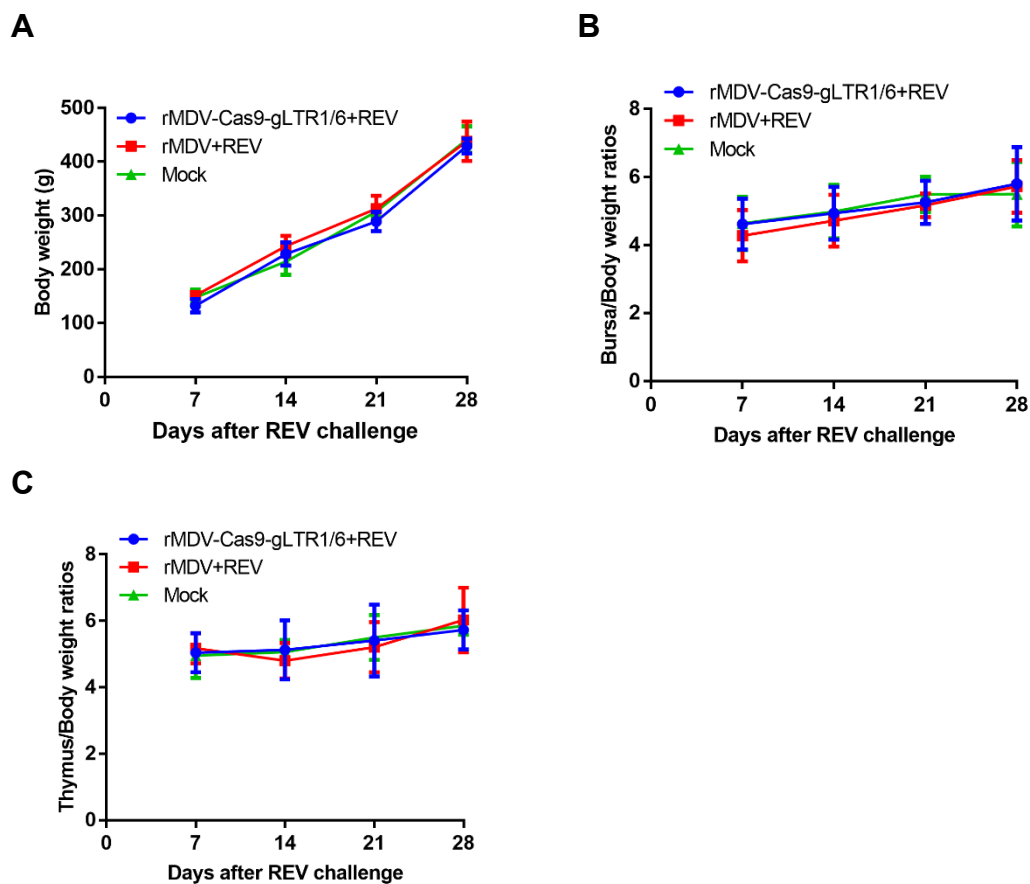


Figure S1. Detection of clinical signs of chickens inoculated with recombinant MDV expression gRNAs/Cas9 after the REV challenge

One-day-old chicks were first inoculated with rMDV-Cas9-gLTR1/6 or the parental MDV (rMDV), and then challenged with the REV HLJR0901 strain at 8 days of age.

The body weights (A), bursa/body (B), and thymus/body (C) weight ratios were monitored after the REV challenge.

Table S1. Selected sgRNAs targeting REV

Name	Position in REV	Target sequence + PAM ^a	Orientation
gLTR1	25-47, 7766-7788	ATGTGGGAGGGAGCTCCGGGGGG	+
gLTR2	36-58, 7777-7799	AGCTCCGGGGGGAATAGCGCTGG	+
gLTR3	107-129, 7848-7870	<u>CCGCCATTGTACTTGATATATTT</u>	-
gLTR4	145-167, 7886-7908	TCGGAATCGGCATCAAGAGC <u>AGG</u>	+
gLTR5	343-365, 8084-8106	CCAGGTGCATCTCTTGCTCGGGG	+
gLTR6	369-391, 8110-8132	<u>CCGTCCTACACATTGTTGTGACG</u>	-
gLTR7	373-395, 8114-8136	<u>CCTACACATTGTTGTGACGTGCG</u>	-
gLTR8	374-396, 8115-8137	CTACACATTGTTGTGACGTG <u>CGG</u>	+
gLTR9	397-419, 8138-8160	<u>CCCAGATTCGAATCTGTAATAAA</u>	-
gLTR10	425-447, 8166-8188	TTTCTTCTATATCCTCAGAT <u>TGG</u>	+
gLTR11	472-494, 8213-8235	GTGTTGGCTGGCCTACTGGG <u>TGG</u>	+
gLTR12	483-505, 8224-8246	<u>CCTACTGGGTGGGGTAGGGATCC</u>	-
gLTR13	506-528, 8247-8269	GGACTGAATCCGTAGTATTT <u>CGG</u>	+
gLTR14	515-537, 8256-8278	<u>CCGTAGTATTTCCGTACAACATT</u>	-
gLTR15	521-543, 8262-8284	TATTTCCGTACAACATTTGG <u>GGG</u>	+
gPBS1	577-599	CCTACTGTTTCTTCGAACTCCGG	-
gPBS2	629-951	CCTCGCGAGGGTTTGGGAGGATC	-
gPBS3	740-762	CCGTCTCTAAGACGGTGATACTA	-
gPBS4	792-814	CCTTGTTTGTTCGTCACCTGT	-
gPBS5	831-853	ATTGGTGTACCCACACCGCGCGG	+
gPol1	2565-2587	AGAATCTGTAGCAATTATCGGGG	+
gPol2	2755-2777	CCCCCGAAATACGGACAGAAGG	+
gPol3	2903-2925	CCCCGGGGTTGGCATCCACACAA	-
gPol4	3009-3031	CCTGCGCGAAACTATTCGCAAAT	-
gPol5	3084-3106	CCTCCCTGTGCGAAAGTCCGGCA	-

^a Protospacer adjacent motif (PAM) sequence is underlined.