

Electronic Supplementary Material

The Efficacy of a Live Attenuated TW I-Type Infectious Bronchitis Virus Vaccine Candidate

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Supporting information to DOI: 10.1007/s12250-021-00419-2

Table S1 RT-PCR amplification primer for the IBV CK/CH/GD/GZ14 strain.

Primer	Location	Forward primers (5'–3')	Downstream primers (5'–3')	Length (bp)
1	1-364	ACTGAAAATAGATATTAATA	GGTGACCCCGTGTTTC	360
2	66-1478	ACGGACTTAAATACCTACAGC	AGCAGTGTTAAGTCATTTTCG	1413
3	1241-2686	TTGCTGGAACCTTGCTTG	CTTCAATGGGCTCTTTAT	1446
4	2599-4151	GATGTCGTGCCTATTAAGG	GCAAAAACCTGTCCAAAT	1553
5	4080-5325	AGATGGTGTTAAATACCGCTC	AACCCAAATTGCCTTAAGAC	1246
6	5189-6534	GAGGTATTAATCAGTTGTTG	ATATGCTGTAGGTTTAACATG	1346
7	6469-7748	ATGTCTCCTGAAGTTGCTG	AACCAAGTAGGAATGTACCA	1280
8	7652-8870	CTGGTGTTCCCTGGTTTTGT	CCAGCCTGTAATCTACTAACAC	1219
9	8605-10060	AATTATGATCTTGCTGCGA	CCATTGGCTAAAGAAAATAA	1460
10	9815-11304	GGTTTTGGAGTAGATGTGTG	ATTACTACAACTATTGGAACAG	1490
11	11213-12572	AGAAGATAGATTCTGAAAAGC	ACTAGGAGTGGTTTGTTTAA	1360
12	12510-14017	ACTGAAGATGGAAATCTTGAG	GACACACCTGCCACTGTAC	1508
13	13897-15404	TAGAGGAACAGGACCAACT	TCCAAAAACAGTACCATTAG	1508
14	15334-16699	TGTCGTACTIONCTGTGGTAATC	CTCTGATTCATAGCATTGTAAG	1366
15	16533-17930	CGTGAGTGTTTCAAGTTAT	AGGGTTGCCTATATCATAGAC	1398
16	17861-19298	ACAACGCATGTATCTTAATG	ATAGTTTGCATGACATCAG	1438
17	19199-20473	TGGTTTACACACTGTTATAGGT	GTCTAAAGGCACTTTGGTAG	1275
18	20397-21605	TCTTTTGTGTGCACTATGTAG	GTGGCTGTTTGTATACGAG	1209
19	21535-22810	AAACAGCTCAGAGTGGTTATT	CTTGAATTTGTTGTAATGCTAG	1276
20	22754-24026	TTGCTGCTTCCTTAATAAG	ATCTAACATTAGTCTAGGCTG	1270
21	23950-25187	TACAATAATACAAGTTCTACT	CACATTTATGTGTAAAGACTAC	1238
22	25074-26224	CCAAAGCGGAAATAAGAAAA	CAGCAACCCACACTATAACCATC	1151
23	26018-27520	CTAAGTTTGAAGGTAGTGGTG	GGCGTCCTAGTGCTGTAC	1503
24	27035-27674	CCAAAGAAGCAGGATGATGAA	TGCTCTAACTCTATACTAGCCT	640

Table S2 Virus shedding in throat and cloaca of 10-days-old SPF chickens immunized with attenuated viruses of different generations at the 5, 10 and 15 days or challenged with CK/CH/GD/GZ14 strain of the 5th generation in the different vaccinated groups at the 5, 10 and 15 days.

Group	5 days post - vaccination		10 days post- vaccination		15 days post- vaccination		5 days post- challenge		10 days post- challenge		15 days post- challenge	
	Throat	Cloaca	Throat	Cloaca	Throat	Cloaca	Throat	Cloaca	Throat	Cloaca	Throat	Cloaca
Generation/Dose	Throat	Cloaca	Throat	Cloaca	Throat	Cloaca	Throat	Cloaca	Throat	Cloaca	Throat	Cloaca
p105(10 ^{3.5} EID ₅₀)	8/10	2/10	8/10	8/10	4/10	5/10	2/10	5/10	1/10	8/10	0/10	1/10
p105(10 ^{4.5} EID ₅₀)	9/10	4/10	9/10	9/10	8/10	7/10	4/10	8/10	2/10	8/10	0/10	2/10
p95(10 ^{3.5} EID ₅₀)	10/10	3/10	10/10	9/10	6/10	5/10	2/10	8/10	6/10	8/10	0/10	2/10
p95(10 ^{4.5} EID ₅₀)	10/10	4/10	10/10	10/10	9/10	8/10	6/10	8/10	10/10	8/10	0/10	3/10
Positive control-p5	/	/	/	/	/	/	10/10	10/10	5/6	4/6	0/6	1/6
Negative control	0/10	0/10	0/10	0/10	0/10	0/10	0/10	0/10	0/10	0/10	0/10	0/10