

Table1 Antimicrobial susceptibility test results

Strain	Penicillin	Erythromycin	Tetracycline	Gentamicin	Florfenicol	Linezolid	Clindamycin	Vancomycin
C.p.7-7-3	≤0.12	>256	16	2048	64	8	>128	0.25
C.p.3TC	1	>256	32	16	16	8	2	0.25
BJA1FB	2	>256	128	>2048	32	8	>128	1
BJA3FB	1	>256	>128	>2048	64	16	>128	0.5
_BRX								
BJA4FB	1	>256	128	>2048	64	8	>128	0.5
_BRX								
BJA5FB	1	>256	64	>2048	32	8	>128	0.5
_BRX								
BJA6FB	0.25	>256	64	>2048	32	32	>128	0.5
_BRX								
C.p.2.001	0.25	32	16	32	16	8	128	0.5
C.p.2.002	0.5	64	64	64	32	8	128	0.25
C.p.2.003	0.5	>256	64	32	16	8	>128	0.5
C.p.2.004	0.25	64	32	64	16	8	64	0.25
C.p.2.007	0.25	16	16	16	16	8	16	0.5
C.p.2.008	2	>256	32	32	16	8	8	0.25
C.p.2.009	1	>256	16	32	4	8	4	0.5
C.p.2.012	0.5	>256	32	64	16	8	>128	0.25
C.p.2.020	0.5	>256	32	64	4	8	64	0.25
C.p.2.035	0.25	>256	32	32	16	8	16	0.25
C.p.2.037	≤0.12	>256	32	16	8	8	4	0.25
C.p.2.052	0.5	>256	32	32	16	8	128	0.5
C.p.2.053	0.25	>256	64	64	16	8	32	0.25
C.p.2.056	0.5	256	32	16	16	8	4	0.25
C.p.2.051	1	>256	4	16	32	8	2	0.25

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7								
C.p.2.06	≤0.12	64	0.5	16	16	8	2	0.25
1								
C.p.2.06	0.5	128	64	32	8	8	8	0.25
2								
C.p.2.06	0.5	>256	32	128	16	8	2	0.5
7								
C.p.2.07	1	256	32	32	16	8	16	0.5
6								
C.p.2.07	1	>256	128	1024	32	8	>128	0.5
7								
C.p.2.07	0.25	256	32	64	16	8	32	0.25
8								
C.p.2.07	0.25	>256	32	64	8	8	8	0.25
9								
C.p.2.08	1	>256	16	16	4	8	1	0.5
1								
C.p.2.08	≤0.12	256	16	16	4	8	128	0.25
2								
C.p.2.08	0.25	>256	32	16	4	8	1	0.25
5								
C.p.2.08	1	>256	64	64	8	8	2	0.25
6								
C.p.2.08	2	>256	64	32	8	8	1	0.25
7								
C.p.2.08	2	>256	64	128	32	16	32	0.5
8								
C.p.2.08	1	>256	32	64	64	16	8	1
9								
C.p.2.09	2	>256	64	32	8	8	8	0.25
0								
C.p.2.09	2	256	32	128	32	16	8	0.25
2								
C.p.2.09	0.25	>256	32	64	16	8	4	0.25
3								
C.p.2.09	1	>256	64	64	8	16	8	0.25
4								
C.p.2.09	2	>256	128	32	16	16	16	0.25
5								
C.p.2.09	1	>256	64	128	32	16	8	0.25
6								
C.p.2.09	2	>256	64	64	16	16	8	0.25
7								
C.p.2.09	1	>256	64	64	32	16	8	0.25

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9								
C.p.2.10	1	>256	128	64	16	8	8	0.25
0								
C.p.2.10	1	>256	64	64	16	8	8	0.25
1								
C.p.2.10	0.25	>256	32	32	16	16	16	0.25
2								
C.p.2.10	2	>256	128	64	16	8	8	0.25
3								
C.p.2.10	1	>256	128	32	16	8	8	0.25
4								
C.p.2.10	1	>256	64	32	8	16	8	0.25
5								
C.p.2.10	2	>256	128	16	8	8	8	0.25
6								
C.p.2.10	2	>256	64	32	16	16	8	0.12
7								
C.p.2.10	1	>256	32	32	8	8	8	1
8								
C.p.2.10	1	>256	128	64	16	8	8	0.25
9								
C.p.2.11	1	>256	32	64	16	64	2	4
0								
C.p.2.11	1	>256	64	32	16	16	32	0.25
1								
C.p.2.11	2	>256	128	64	32	16	8	0.25
2								
C.p.2.11	1	>256	64	32	16	16	8	0.12
4								
C.p.2.11	1	>256	64	64	2	8	8	0.25
5								
C.p.2.11	4	>256	32	32	32	16	1	0.25
6								
C.p.2.11	1	>256	64	32	8	16	8	0.25
7								
C.p.2.11	0.5	256	4	64	16	8	4	0.25
8								
C.p.2.11	1	>256	32	32	16	16	2	0.5
9								
C.p.2.12	1	>256	64	16	8	4	4	0.12
0								
C.p.2.12	1	>256	64	64	16	16	8	0.25
2								
C.p.2.12	2	>256	64	64	16	16	8	0.25

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3								
C.p.2.12	2	>256	64	16	16	16	8	0.25
4								
C.p.2.12	1	>256	64	64	8	8	4	0.25
5								
C.p.2.12	2	>256	64	128	16	8	8	0.25
7								
C.p.2.12	0.25	>256	8	64	4	8	4	0.12
8								
C.p.2.12	≤0.12	>256	4	32	64	8	4	0.12
9								
C.p.2.13	2	>256	16	16	16	16	0.5	0.25
1								
C.p.2.13	1	>256	64	32	16	8	4	0.12
3								
C.p.2.13	1	>256	64	32	8	8	4	0.12
5								
C.p.2.13	1	>256	64	64	4	8	4	0.12
6								
C.p.2.13	1	>256	64	1024	32	8	>128	0.25
8								
C.p.2.13	1	>256	64	64	16	8	8	0.25
9								
C.p.2.14	1	>256	128	>2048	64	8	>128	0.5
0								
C.p.2.14	2	>256	16	32	16	8	4	0.25
1								
C.p.2.14	1	>256	128	32	16	16	8	0.25
2								
C.p.2.14	1	>256	128	64	16	8	8	0.25
3								
C.p.2.14	1	>256	128	64	8	32	8	0.12
4								
C.p.2.14	1	>256	128	64	16	16	8	0.25
5								
C.p.2.14	2	>256	128	2048	32	8	>128	0.5
6								
C.p.2.14	2	>256	64	32	8	8	0.5	0.25
8								
C.p.2.14	1	>256	128	>2048	32	8	>128	0.5
9								
C.p.2.15	1	>256	128	32	32	16	8	0.12
0								
C.p.2.15	1	>256	128	32	8	8	4	0.12

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3								
C.p.2.15	1	>256	128	64	4	8	4	0.25
4								
C.p.2.15	0.5	>256	64	>2048	32	8	>128	0.5
5								
C.p.2.15	1	>256	64	>2048	32	8	>128	0.5
6								
C.p.2.15	0.5	256	32	16	64	8	4	1
7								
C.p.2.15	2	>256	64	32	8	8	4	0.12
8								
C.p.2.15	1	>256	32	64	16	8	2	0.12
9								
C.p.2.16	2	>256	64	64	16	16	8	0.25
0								
C.p.2.16	1	>256	128	>2048	64	8	>128	2
1								
C.p.2.16	2	>256	64	>2048	64	8	>128	0.5
2								
C.p.2.16	1	256	16	64	32	16	0.25	0.03
3								
C.p.2.16	2	>256	64	>2048	32	8	>128	0.5
4								
C.p.2.16	1	>256	32	16	8	8	2	0.25
5								
C.p.2.16	1	>256	64	>2048	32	8	>128	0.5
6								
C.p.2.16	1	>256	128	1024	32	8	>128	0.5
7								
C.p.2.16	0.25	>256	64	16	16	8	1	0.12
8								
C.p.2.16	0.25	>256	64	32	16	8	1	0.25
9								
C.p.2.17	≤0.12	>256	32	64	32	16	8	0.5
0								
C.p.2.17	1	>256	64	16	16	16	4	0.12
1								
C.p.2.27	1	>256	32	128	64	16	8	2
8								
C.p.2.42	1	>256	32	32	8	8	2	0.25
9								
C.p.2.49	1	>256	32	32	4	8	0.5	0.12
7								
C.p.2.53	1	>256	64	64	16	16	4	0.25

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8								
C.p.2.56	1	>256	64	2048	32	8	>128	0.5
0								
C.p.2.56	1	>256	64	>2048	32	8	>128	0.25
8								
C.p.2.56	1	>256	32	64	16	8	4	0.25
9								
C.p.2.57	1	>256	64	64	16	16	2	0.12
5								
C.Pe193	2	>256	64	64	16	8	2	0.25
C.Pe198	2	>256	128	64	16	8	8	0.25
C.pe202	≤0.12	>256	16	512	16	8	>128	0.25
C.pe214	2	>256	64	128	8	8	16	0.25
C.pe218	2	>256	64	64	4	8	>128	0.25
C.pe220	1	>256	128	64	16	8	8	0.25
C.pe225	1	256	32	64	32	16	8	0.25
C.pe228	2	>256	128	64	8	8	>128	0.25
C.pe484	1	1	4	32	16	8	2	0.25
C.pe487	1	>256	8	512	16	4	128	0.25
GZA1H	≤0.12	>256	>128	>2048	128	32	128	2
B								
GZA2H	1	>256	128	>2048	32	8	>128	1
B								
HNA2H	1	>256	>128	>2048	64	16	128	2
B								
HNA4F	2	>256	64	>2048	64	16	>128	1
D								
HNA5H	2	>256	16	8	8	8	2	0.12
B								
HNA6FB	0.5	>256	64	>2048	32	8	2	0.25
HNA8FB	0.5	>256	128	>2048	32	16	1	0.25
HNA8H	1	>256	32	16	16	8	2	0.12
B								
HNA9FB	≤0.12	>256	64	>2048	32	8	>128	0.12
HNA9H	1	>256	8	64	8	8	1	0.12
B								
SXA2FB	1	>256	128	>2048	64	8	>128	0.5
SXB1FB	1	>256	32	64	32	8	2	0.25
SXB1HB	1	>256	128	>2048	64	8	>128	0.5
C.p.2.28	2	>256	64	128	8	8	16	0.25
7								
C.p.2.29	2	>256	64	64	4	8	>128	0.25
8								
C.p.2.29	1	>256	128	64	16	8	8	0.25



Table2 Toxin-activity gene cpa pcr program

A. Primer Information				B. PCR Reaction System (Total Volume: 20 µL)			C. PCR Amplification Program		
Gene	Forward primer sequence (5'→3')	Reverse primer sequence (5'→3')	Product length (bp)	Component	Volume (µL)	Note	Temperature (°C)	Time	Cycles
*cpa	GCTAAT GTTAC	CCTCT GATAC	325	Forward primer	1	-	95	5 min	1
*	TGCCG TTGA	ATCGT GTAAG		Reverse primer	1	-	95	30 s	35
				2×Taq PCR StarMix with Loading Dye ddH <sub>2</sub> O	10	Contains Taq enzyme, dNTPs, loading dye	55	30 s	35
				ddH <sub>2</sub> O	5	Nuclease -free	72	30 s	35
				DNA template	3	Genomic DNA of *Clostridium perfringens*	72	10 min	1
				<b>Total</b>	<b>20</b>	Final volume	4	30 min	1