Supplemental Table S1: Primers used for PCR and sequencing

Gene	Function	Primer	PCR and sequencing primers (5'-3') forward/reverse	GenBank accession number	Positions	Amplicon size (bp)
cTPs	CTP synthase	P1967 P1968	TGGTTGAATTCCTATGCTTCTT ATAACAGCGGCTTCACTTGG	ABDQ01000000	982-1545	564
glpK	Glycerol kinase	P1965 P1966	TCAATGCTTCCAGAAGTTAAACC GCAAGACCTGCAAGATAAGCA	ABDQ01000000	637-1349	713
rpoB	RNA polymerase B subunit	P1985 P1986	CCTAAGGCTGAACATGATGG TTCCTGCCATCTTATCTCCAA	ACSJ01000000	2080-2821	742
gyrA	DNA gyrase A subunit	P1987 P1988	TTTGATGGAGAAGAAAAAGAACC TTCTTCTTGTTATAACTTCTTCTTGGA	ACSJ01000000	442-1087	646
dnaK	Chaperone protein (hsp70)	P1989 P1990	GCATCACTTGCATATGGTCTTG TTGAACTGCTGCACCCATAG	ACSJ01000000	451-1050	600
Botulinolysin[1]	Pore-forming toxin	P2006 P2007	TGCAAATAGRAATCTTRTAGAAAAYAA CATTCCCAWGCAAGRCCWG	NZ_ACSJ01000007	405-1475	1071
Novyilysin	Pore-forming toxin	P2004 P2005	AATCCAGCATATCCGATTTCA CACCATTCCCATGCAAGAC	NZ_ACSJ01000007	1141-1478	338
C2 toxin component I	Actin ADP-ribosylating toxin	P2012 P2013	GAAGAAAAACGTTGGTTTACGA TTGGCTTTACAGATAGAGCAGAA	AB465554	73-871	799
C2 toxin component II	Actin ADP-ribosylating toxin	P2014 P2015	AAAAGCTGTAGCATGGGATGA GGATAGGTTCCACCAGGATTT	AB465554	621-1238	618

[1]Botunolysin gene is noted "tetanolysin O" in the genome annotation of NZ_ACSJ01000007.

Supplemental Table S2. Genome sequences and strains used in this study. Additional strains were *C. botulinum* type C 468, *C. novyi* A ATCC17861^T (AIP10062^T), *C. novyi* B AIP212.86, *C. haemolyticum* ATCC9650^T (AIP10052^T).

	GenBank genome sequence accession number (sequence status) where available
AIP981.10	This study
Clostridium botulinum A ATCC 3502	AM412317 (complete)
Clostridium botulinum C str. Eklund	ABDQ01000000 (assembly)
C. botulinum type C 468	This study
Clostridium botulinum C/D mosaic str. BKT028387	AESB01000174 (assembly)
Clostridium botulinum C/D mosaic str. BKT015925	CP002410 (complete)
Clostridium botulinum C/D mosaic str. V891	AESCA00000000 (draft)
Clostridium botulinum C/D mosaic AIP26.09	This study
Clostridium botulinum C/D mosaic str. 6813	This study
Clostridium botulinum D/C mosaic str. OFD05	This study
Clostridium botulinum D/C mosaic str. OFD09	This study
Clostridium botulinum D str. 1873	ACSJ01000000 (assembly)
C. haemolyticum AIP10052^T (=ATCC9650^T)	This study
C. novyi A AIP10062^T (=ATCC17861^T)	This study
Clostridium novyi B AIP212.86	This study
Clostridium novyi NT	CP000382 (complete)
Clostridium perfringens str. 13	BA000016 (complete)