

Supplementary Fig. 1. A multiple sequence alignment of the *tox* genes plus 100 bp upstream and downstream of the gene from *C. ulcerans* 102, *C. diphtheriae* NCTC 13129 and the tree strains belonging to the novel species using CLUSTAL O (1.2.4). The promotor region, start codon and the two base-pair (GG) insertion in strains W25 and KL1196 are highlighted in yellow.

C.ulcerans_0102	gaggggagttctagtggtgaatatattaataactgggaacaggcgaaagagtttaagcgta	657
C.diphtheriae_NCTC13129	gaggggagttctagcgttggaatatattaataactgggaacaggcgaaagcgtaagcgta	658
C.ulcerans_KL1196	gaggggagttctagcgttggaatatattaataactgggaacaggcgaaagcgtaagcgta	660
C.ulcerans_W25	gaggggagttctagcgttggaatatattaataactgggaacaggcgaaagcgtaagcgta	660
C.ulcerans_P0100/5	gaggggagttctagcgttggaatatattaataactgggaacaggcgaaagcgtaagcgta *****	658
C.ulcerans_0102	gaacttgagattaatgttgaaacccgtggaaaacgtggccaagatgcgatgtatgagtat	717
C.diphtheriae_NCTC13129	gaacttgagattaatgttgaaacccgtggaaaacgtggccaagatgcgatgtatgagtat	718
C.ulcerans_KL1196	gaacttgagattaatgttgaaacccgtggaaaacgtggccaagatgcgatgtatgagtat	720
C.ulcerans_W25	gaacttgagattaatgttgaaacccgtggaaaacgtggccaagatgcgatgtatgagtat	720
C.ulcerans_P0100/5	gaacttgagattaatgttgaaacccgtggaaaacgtggccaagatgcgatgtatgagtat *****	718
C.ulcerans_0102	atggctcaatcgtgtgcgggaaatcgtgtcaggcgatcagtaggtagctcattgtcatgc	777
C.diphtheriae_NCTC13129	atggctcaagcctgtgcaggaaatcgtgtcaggcgatcagtaggtagctcattgtcatgc	778
C.ulcerans_KL1196	atggctcaatcgtgtgcgggaaatcgtgtcaggcgatcagtaggtagctcattgtcatgc	780
C.ulcerans_W25	atggctcaatcgtgtgcgggaaatcgtgtcaggcgatcagtaggtagctcattgtcatgc	780
C.ulcerans_P0100/5	atggctcaatcgtgtgcgggaaatcgtgtcaggcgatcagtaggtagctcattgtcatgc ***** * *****	778
C.ulcerans_0102	ataaatcttgattgggatgccataagggataaaactaagacaaagatagagtctttgaaa	837
C.diphtheriae_NCTC13129	ataaatcttgattgggatgctataagggataaaactaagacaaagatagagtctttgaaa	838
C.ulcerans_KL1196	ataaatcttgattgggatgctataagggataaaactaagacaaagatagagtctttgaaa	840
C.ulcerans_W25	ataaatcttgattgggatgctataagggataaaactaagacaaagatagagtctttgaaa	840
C.ulcerans_P0100/5	ataaatcttgattgggatgctataagggataaaactaagacaaagatagagtctttgaaa *****	838
C.ulcerans_0102	gagcatggcctatcaaaaaataaatgagcgaaagtcaccaataaaacagtcctctgaggaa	897
C.diphtheriae_NCTC13129	gagcatggcctatcaaaaaataaatgagcgaaagtcaccaataaaacagtcctctgaggaa	898
C.ulcerans_KL1196	gagcatggcctatcaaaaaataaatgagcgaaagtcaccaataaaacagtcctctgaggaa	900
C.ulcerans_W25	gagcatggcctatcaaaaaataaatgagcgaaagtcaccaataaaacagtcctctgaggaa	900
C.ulcerans_P0100/5	gagcatggcctatcaaaaaataaatgagcgaaagtcaccaataaaacagtcctctgaggaa *****	898
C.ulcerans_0102	aaggctaaacaatatctagaagaatttcacaaacggcattagagcatcctgaattgtca	957
C.diphtheriae_NCTC13129	aaagctaaacaatacctagaagaatttcacaaacggcattagagcatcctgaattgtca	958
C.ulcerans_KL1196	aaagctaaacaatatctagaagaatttcacaaacggcattagacatcctgaattgtca	960
C.ulcerans_W25	aaagctaaacaatatctagaagaatttcacaaacggcattagacatcctgaattgtca	960
C.ulcerans_P0100/5	aaagctaaacaatatctagaagaatttcacaaacggcattagacatcctgaattgtca ** *****	958
C.ulcerans_0102	gaacttaaaacggttactggggtaattctgtatttgcctggggctaactatgcgctgtgg	1017
C.diphtheriae_NCTC13129	gaacttaaaacggttactggggtaattctgtatttgcctggggctaactatgcgctgtgg	1018
C.ulcerans_KL1196	gaacttaaaacggttactggggtaattctgtatttgcctggggctaactatgcgctgtgg	1020
C.ulcerans_W25	gaacttaaaacggttactggggtaattctgtatttgcctggggctaactatgcgctgtgg	1020
C.ulcerans_P0100/5	gaacttaaaacggttactggggtaattctgtatttgcctggggctaactatgcgctgtgg *****	1018
C.ulcerans_0102	gcggtaaacgtttgcgaagttgtcgatagtaaaacagctgataatttagaaaagacaact	1077
C.diphtheriae_NCTC13129	gcagtaaacgtttgcgaagttatcgatagcgaaacagctgataatttgaaaagacaact	1078
C.ulcerans_KL1196	gcagtaaacgtttgcgaagttatcgatagcgaaacagctgataatttgaaaagacaact	1080
C.ulcerans_W25	gcagtaaacgtttgcgaagttatcgatagcgaaacagctgataatttgaaaagacaact	1080
C.ulcerans_P0100/5	gcagtaaacgtttgcgaagttatcgatagcgaaacagctgataatttgaaaagacaact ** *****	1078
C.ulcerans_0102	gctgctctttcgatacttcttggtatcggttagcgtaatgggtattgcagacgggtgccgtt	1137
C.diphtheriae_NCTC13129	gctgctctttcgatacttcttggtatcggttagcgtaatgggcattgcagacgggtgccgtt	1138
C.ulcerans_KL1196	gctgctctttcgatacttcttggtatcggttagcgtaatgggtattgcggacgggtgccgtt	1140
C.ulcerans_W25	gctgctctttcgatacttcttggtatcggttagcgtaatgggtattgcggacgggtgccgtt	1140
C.ulcerans_P0100/5	gctgctctttcgatacttcttggtatcggttagcgtaatgggtattgcggacgggtgccgtt *****	1138
C.ulcerans_0102	caccacaatacgaagagatagtggcacaaatcgatagctttatcgtctttaatggttgct	1197
C.diphtheriae_NCTC13129	caccacaatacagaagagatagtggcacaaatcaatagctttatcgtctttaatggttgct	1198
C.ulcerans_KL1196	caccacaatactgaagagatagtggcacaaatcaatagctttatcgtctttaatggttgct	1200
C.ulcerans_W25	caccacaatactgaagagatagtggcacaaatcaatagctttatcgtctttaatggttgct	1200
C.ulcerans_P0100/5	caccacaatactgaagagatagtggcacaaatcaatagctttatcgtctttaatggttgct *****	1198
C.ulcerans_0102	caagctataaccattggttaggagagctagttgatcttggttttgctgcataataattttgta	1257
C.diphtheriae_NCTC13129	caagctatttcattggttaggagagctagttgatattggttttgctgcataataattttgta	1258
C.ulcerans_KL1196	caagctataaccattggttaggagagctagttgatattggttttgctgcataataattttgta	1260

C.ulcerans_W25	caagctataccattggttaggagagctagtgtgatattggtttcgctgcatataattttgtgta	1260
C.ulcerans_P0100/5	caagctataccattggttaggagagctagtgtgatattggtttcgctgcatataattttgtgta	1258

C.ulcerans_0102	gagagtattatcaattttatttcaagtagttcataattcgtataatcgctccgcgtactct	1317
C.diphtheriae_NCTC13129	gagagtattatcaattttatttcaagtagttcataattcgtataatcgctccgcgtactct	1318
C.ulcerans_KL1196	gagagtattatcaattttatttcaagtagttcataattcgtataatcgctccgcgtactct	1320
C.ulcerans_W25	gagagtattatcaattttatttcaagtagttcataattcgtataatcgctccgcgtactct	1320
C.ulcerans_P0100/5	gagagtattatcaattttatttcaagtagttcataattcgtataatcgctccgcgtactct	1318

C.ulcerans_0102	ccggggcataaaacgcaaccattttgttcatggcggtatgctgccagttggaacactgtt	1377
C.diphtheriae_NCTC13129	ccggggcataaaacacaaccattttcttcatgacgggtatgctgtcagttggaacactgtt	1378
C.ulcerans_KL1196	ccggggcataaaacgcaaccattttcttcatgacgggtatgctgtcagttggaacactgtt	1380
C.ulcerans_W25	ccggggcataaaacgcaaccattttcttcatgacgggtatgctgtcagttggaacactgtt	1380
C.ulcerans_P0100/5	ccggggcataaaacgcaaccattttcttcatgacgggtatgctgtcagttggaacactgtt	1378

C.ulcerans_0102	gaagattcgataatcaaaactggttttcaaggcgagagcgggcacgacataaaaaattact	1437
C.diphtheriae_NCTC13129	gaagattcgataatccgaactggttttcaaggcgagagtgggcacgacataaaaaattact	1438
C.ulcerans_KL1196	gaagattcgataatccaaactggttttcaaggcgagagtgggcacgacataaaaaattact	1440
C.ulcerans_W25	gaagattcgataatccaaactggttttcaaggcgagagtgggcacgacataaaaaattact	1440
C.ulcerans_P0100/5	gaagattcgataatccaaactggttttcaaggcgagagtgggcacgacataaaaaattact	1438

C.ulcerans_0102	gctgaaaataccccgcttccaatcgcggtgtcttactaccgactatttctggaaagctg	1497
C.diphtheriae_NCTC13129	gctgaaaataccccgcttccaatcgcggtgtcttactaccgactatttctggaaagctg	1498
C.ulcerans_KL1196	gctgaaaataccccgcttccaatcgcggtgtcttactaccgactatttctggaaagctg	1500
C.ulcerans_W25	gctgaaaataccccgcttccaatcgcggtgtcttactaccgactatttctggaaagctg	1500
C.ulcerans_P0100/5	gctgaaaataccccgcttccaatcgcggtgtcttactaccgactatttctggaaagctg	1498

C.ulcerans_0102	gacgttaataagtccaagactcatatttccgtaaatggtcgaaaaataaggatgcatgc	1557
C.diphtheriae_NCTC13129	gacgttaataagtccaagactcatatttccgtaaatggtcgaaaaataaggatgcatgtgc	1558
C.ulcerans_KL1196	gacgttaataagtccaagactcatatttccgtaaatggtcgaaaaataaggatgcatgc	1560
C.ulcerans_W25	gacgttaataagtccaagactcatatttccgtaaatggtcgaaaaataaggatgcatgc	1560
C.ulcerans_P0100/5	gacgttaataagtccaagactcatatttccgtaaatggtcgaaaaataaggatgcatgc	1558

C.ulcerans_0102	agagctatagatgatgtacaaccttttgcgccctaaaacccctgtttatgttggaat	1617
C.diphtheriae_NCTC13129	agagctatagacggtgatgtaaccttttgcgccctaaatctcctgtttatgttggaat	1618
C.ulcerans_KL1196	agagctatagacggtgatgtaaccttttgcgccctaaatctcctgtttatgttggaat	1620
C.ulcerans_W25	agagctatagacggtgatgtaaccttttgcgccctaaatctcctgtttatgttggaat	1620
C.ulcerans_P0100/5	agagctatagacggtgatgtaaccttttgcgccctaaatctcctgtttatgttggaat	1618

C.ulcerans_0102	gggtgtgatgcgaatcttcatgtggcatttcatagaagtagctctgagaaaattcattct	1677
C.diphtheriae_NCTC13129	gggtgtgatgcgaatcttcatgtggcatttcatagaagtagctcggagaaaattcattct	1678
C.ulcerans_KL1196	gggtgtgatgcgaatcttcatgtggcatttcatagaagtagctcggagaaaattcattct	1680
C.ulcerans_W25	gggtgtgatgcgaatcttcatgtggcatttcatagaagtagctcggagaaaattcattct	1680
C.ulcerans_P0100/5	gggtgtgatgcgaatcttcatgtggcatttcatagaagtagctcggagaaaattcattct	1678
	**	
C.ulcerans_0102	gatgaaactccgttgagctccatagacgtgcttgggtaccagaaaacagtggtacacacc	1737
C.diphtheriae_NCTC13129	aatgaaatttcgtcggattccataggcgttcttgggtaccagaaaacagtagatcacacc	1738
C.ulcerans_KL1196	aatgaaatttcgtcggattccataggcgttcttgggtaccagaaaacagtagatcacacc	1740
C.ulcerans_W25	aatgaaatttcgtcggattccataggcgttcttgggtaccagaaaacagtagatcacacc	1740
C.ulcerans_P0100/5	aatgaaatttcgtcggattccataggcgttcttgggtaccagaaaacagtagatcacacc	1738

C.ulcerans_0102	aaagtgaattctaagctatcgctattttgtgaagcctgaaaagctgaaaagttagtggggtc	1797
C.diphtheriae_NCTC13129	aaggttaattctaagctatcgctatttttgaatcaaaagctgaaa-ggtagtgggggtc	1797
C.ulcerans_KL1196	aaggttaattctaagctatcgctatttttgaatcaaaagctgaaa-ggtagtgggggtc	1799
C.ulcerans_W25	aaggttaattctaagctatcgctatttttgaatcaaaagctgaaa-ggtagtgggggtc	1799
C.ulcerans_P0100/5	aaggttaattctaagctatcgctatttttgaatcaaaagctgaaa-ggtagtgggggtc	1797
	**	
C.ulcerans_0102	gtgtgccggtaagccgaacaggtccggaatgggtattggagtaatccaaggtaaaaggcta	1857
C.diphtheriae_NCTC13129	gtgtgccggtaagccgaacaggtccggaatggcgctatagtatgcacaggtagagcagaa	1857
C.ulcerans_KL1196	gtgtgccggtaagccgaacaggtccggaatggcgctatagtatgcacaggtagagcagaa	1859
C.ulcerans_W25	gtgtgccggtaagccgaacaggtccggaatggcgctatagtatgcacaggtagagcagaa	1859
C.ulcerans_P0100/5	gtgtgccggtaagccgaacaggtccggaatggcgctatagtatgcacaggtagagcagaa	1857

C.ulcerans_0102	ttagcatctgactacggatcagaagg	1883
C.diphtheriae_NCTC13129	ttcgaatctgactacggatcagaagg	1883
C.ulcerans_KL1196	ttcttatctgactacggatcagaagg	1885
C.ulcerans_W25	ttcttatctgactacggatcagaagg	1885
C.ulcerans_P0100/5	ttcttatctgactacggatcagaagg	1883
	** *****	