

Table S1. *Elizabethkingia* strains, isolation source, isolation country, iDDH value, and similarity of 16S rRNA gene and complete *rpoB* gene to each type strain.

Strain (GenBank accession no.)	Isolation source	Isolation country	iDDH value	16S rRNA similarity (%)	Complete <i>rpoB</i> similarity (%)
<i>E. anophelis</i> 502 (AVCQ01000002.1)	Wound swab	United Kingdom	91.07	99.27	99.29
<i>E. anophelis</i> CIP60.58 (FTQY01000009.1)	NA	NA	93.42	99.27	99.56
<i>E. anophelis</i> CIP111046 (FTRB01000010.1)	NA	NA	87.09	99.27	99.14
<i>E. anophelis</i> CIP111067 (FTQZ01000016.1)	NA	NA	92.48	99.87	99.61
<i>E. anophelis</i> E18064 (CCAB010000143.1)	NA	NA	92.41	99.93	98.25
<i>E. anophelis</i> DSM-23781 (FLST01000010.1)	NA	NA	98.21	100	100
<i>E. anophelis</i> PW2810 (CBYF010000021.1)	NA	NA	88.85	99.27	99.11
<i>E. anophelis</i> NUH1 (ASYH01000018.1)	Hand hygiene sink aerator	Singapore	81.59	99.93	99.48
<i>E. anophelis</i> NUH4 (ASYI01000018.1)	Hand hygiene sink aerator	Singapore	79.48	99.93	99.48
<i>E. anophelis</i> NUH6 (ASYJ01000035.1)	Hand hygiene sink aerator	Singapore	86.54	99.93	99.48
<i>E. anophelis</i> NUH11 (ASYK01000059.1)	Hand hygiene sink aerator	Singapore	86.52	99.93	99.48
<i>E. anophelis</i> NUHP2 (ASYF01000012.1)	Hand hygiene sink aerator	Singapore	81.72	99.93	99.48
<i>E. anophelis</i> NUHP3 (ASYG01000015.1)	NA	Singapore	81.72	99.93	99.48
<i>E. anophelis</i> PW2806 (CBYD010000040.1)	NA	NA	93.33	99.93	99.56
<i>E. anophelis</i> PW2809 (CBYE010000030.1)	NA	NA	93.29	99.28	99.56
<i>E. anophelis</i> 3375 (MAHM01000015.1)	NA	USA	92.37	99.74	99.53
<i>E. anophelis</i> 6499925 (QNTZ01000010.1)	Blood	USA	93.32	99.74	99.61
<i>E. anophelis</i> 40313151 (QNTY01000011.1)	Blood	USA	92.61	99.74	99.53
<i>E. anophelis</i> B2D (JNCG01000001.1)	Dental plaque	Malaysia	85.21	99.34	99.11

<i>E. anophelis</i> BP8467 (VTFI01000009.1)	Blood	Vellore	93.34	99.8	99.61
<i>E. anophelis</i> CSID 3000516074 (MAHA01000005.1)	NA	USA	92.35	99.74	99.53
<i>E. anophelis</i> CSID 3000516810 (MAHH01000024.1)	NA	USA	93.4	99.93	99.5
<i>E. anophelis</i> CSID 3000516978 (MAHJ01000016.1)	NA	USA	87.26	99.34	99.24
<i>E. anophelis</i> CSID 3000517066 (MAHL01000016.1)	NA	USA	86.46	99.34	99.27
<i>E. anophelis</i> CSID 3015183679 (MAHO01000015.1)	NA	USA	89.76	99.93	99.45
<i>E. anophelis</i> EM361-97 (LWDS01000010.1)	Blood	Taiwan	91.43	100	99.16
<i>E. anophelis</i> Po0527107 (CCAC010000034.1)	NA	NA	92.42	99.93	98.25
<i>E. anophelis</i> LDVH-AR107 (CIP108654.1)	Internal organs	France	83.99	99.93	98.25
<i>E. anophelis</i> SQ122 (JADRJG010000001.1)	Blood	China	93.87	99.93	99.53
<i>E. anophelis</i> EA1 (JACLEZ010000013.1)	NA	China	85.64	99.93	99.03
<i>E. anophelis</i> EA2 (JACLFD010000007.1)	NA	China	93.28	99.74	99.53
<i>E. anophelis</i> EA3 (JACLFE010000013.1)	NA	China	85.64	99.93	99.03
<i>E. anophelis</i> EA4 (JACLFF010000007.1)	NA	China	94.05	99.93	99.61
<i>E. anophelis</i> EA5 (JACLFG010000007.1)	NA	China	94.05	99.93	99.61
<i>E. anophelis</i> EA6 (JACLFH010000017.1)	NA	China	97.84	100	100
<i>E. anophelis</i> EA7 (JACLFI010000009.1)	NA	China	94.38	99.93	99.61
<i>E. anophelis</i> EA8 (JACLFJ010000009.1)	NA	China	94.38	99.93	99.61
<i>E. anophelis</i> EA9 (JACLFK010000006.1)	NA	China	94.09	99.93	99.61
<i>E. anophelis</i> EA10 (JACLEP010000007.1)	NA	China	94.06	99.93	99.61
<i>E. anophelis</i> EA11 (JACLEQ010000009.1)	NA	China	94.38	99.93	99.61
<i>E. anophelis</i> EA12 (JACLER010000009.1)	NA	China	94.38	99.93	99.61
<i>E. anophelis</i> EA13 (JACLES010000006.1)	NA	China	94.05	99.93	99.61

<i>E. anophelis</i> EA14 (JACLET010000006.1)	NA	China	94.05	99.93	99.61
<i>E. anophelis</i> EA15 (JACLEU010000013.1)	NA	China	85.64	99.93	99.03
<i>E. anophelis</i> EA16 (JACLEV010000007.1)	NA	China	94.09	99.93	99.61
<i>E. anophelis</i> EA17 (JACLEW010000007.1)	NA	China	94.05	99.93	100
<i>E. anophelis</i> EA18 (JACLEX010000007.1)	NA	China	93.28	99.74	99.53
<i>E. anophelis</i> EA19 (JACLEY010000007.1)	NA	China	93.28	99.74	99.53
<i>E. anophelis</i> EA20 (JACLFA010000013.1)	NA	China	85.64	99.93	99.03
<i>E. anophelis</i> EA21 (JACLFB010000008.1)	NA	China	93.28	99.74	99.53
<i>E. anophelis</i> EA22 (JACLFC010000013.1)	NA	China	85.63	99.93	99.03
<i>E. anophelis</i> UCLA2018 (JADEZX010000029.1)	Blood	USA	81.68	99.93	99.48
<i>E. anophelis</i> CSID 3000653323 (NWMM01000008.1)	Blood	USA	86.41	99.34	100
<i>E. anophelis</i> CSID 3000726633 (NWMIO1000004.1)	Blood	USA	85.7	99.34	99.11
<i>E. anophelis</i> CSID 3000726811 (NWMH01000002.1)	Urine	USA	85.7	99.34	99.11
<i>E. anophelis</i> CSID 3015183680 (MAHP01000007.1)	NA	USA	78.03	99.93	99.48
<i>E. anophelis</i> CSID 3015183686 (MAHR01000042.1)	NA	USA	82.7	99.93	99.48
<i>E. anophelis</i> CSID 3015183678 (MAFY01000020.1)	NA	USA	95.43	99.93	99.69
<i>E. anophelis</i> UCLA EA-1 (JADEZW010000013.1)	Tracheal aspirate	USA	81.68	99.93	99.48
<i>E. anophelis</i> As1 (LFKT01000010.1)	Whole mosquito body	USA	98.18	100	100
<i>E. anophelis</i> F3543 (MAHT01000006.1)	CSF	USA	93.26	99.74	99.53
<i>E. anophelis</i> PHOL-785 (RSAV01000007.1)	Endoscopy specimen	Canada	87.14	99.24	99.16
<i>E. anophelis</i> PHOL-104 (RSAW01000010.1)	Fluid	Canada	94	99.93	99.5
<i>E. anophelis</i> PHOL-537 (RSAX01000013.1)	Urine	Canada	89.01	99.27	99.16
<i>E. anophelis</i> PHOL-515 (RSAY01000011.1)	Blood	Canada	94.53	99.74	99.5

<i>E. anophelis</i> PHOL-090 (RSAZ01000007.1)	Aspirate	Canada	93.75	100	99.29
<i>E. anophelis</i> GX130 (SYWB01000016.1)	Blood	China	94.99	100	99.5
<i>E. anophelis</i> NCTC10586 (UARL01000016.1)	NA	NA	92.86	99.74	99.53
<i>E. anophelis</i> OSUVM1 (PJMA01000002.1)	Equine stall	USA	88.76	99.34	99.11
<i>E. anophelis</i> NCTC10588 (UFYD01000001.1)	NA	NA	94.47	99.93	99.58
<i>E. anophelis</i> 3375 (CP016373.1)	NA	USA	93.29	99.74	99.53
<i>E. anophelis</i> R26 (CP023401.1)	<i>Anopheles gambiae</i> G3 adults	Sweden	98.3	100	100
<i>E. anophelis</i> F3543 (CP014340.1)	Cerebrospinal fluid	USA	93.36	99.74	99.53
<i>E. anophelis</i> E6809 (CP014339.1)	Blood	USA	92.59	99.74	99.53
<i>E. anophelis</i> Ag1 (CP023402.1)	Gut	USA	98.29	100	100
<i>E. anophelis</i> 0422 (CP016370.1)	Blood	USA	93.59	99.67	99.56
<i>E. anophelis</i> F3201 (CP016374.1)	NA	Kuwait	89.06	99.27	99.14
<i>E. anophelis</i> FMS-007 (CP006576.1)	Sputum	China	92.31	100	99.5
<i>E. anophelis</i> CSID 3015183684 (CP015066.2)	Blood	USA	94.19	99.93	99.69
<i>E. anophelis</i> CSID 3000521207 (CP015067.2)	NA	USA	94.24	99.93	99.69
<i>E. anophelis</i> CSID 3015183681 (CP015068.2)	NA	USA	94.19	99.93	99.69
<i>E. anophelis</i> SEA01 (CP069277.1)	Blood	India	90.37	98.88	99.27
<i>E. anophelis</i> 2008N07-201 (CP077751.1)	Blood	Taiwan	91.55	100	99.27
<i>E. anophelis</i> 090-MNO-R (CP077749.1)	Blood	Taiwan	94.18	99.67	99.69
<i>E. anophelis</i> 2002C02-176 (CP077754.1)	Respiratory tract	Taiwan	91.54	100	99.27
<i>E. anophelis</i> 229-MNO-R (CP077750.1)	Blood	Taiwan	93.5	100	99.61
<i>E. anophelis</i> 2002N07-090 (CP077753.1)	Blood	Taiwan	94.18	99.67	99.69
<i>E. anophelis</i> 2008S01-229 (CP077752.1)	Blood	Taiwan	93.51	100	99.61

<i>E. anophelis</i> CSID 3015183678 (CP014805.2)	NA	USA	94.19	99.93	99.69
<i>E. anophelis</i> NUHP1 (CP007547.1)	NA	Singapore	93.1	99.93	99.48
<i>E. anophelis</i> JUNP 353 (AP022313.1)	NA	Nepal	93.51	99.93	99.48
<i>E. anophelis</i> 296-96 (CP046080.1)	Blood	Taiwan	94.16	99.93	99.58
<i>E. anophelis</i> AR6-8 (CP023403.1)	NA	China	98.29	100	100
<i>E. anophelis</i> AR4-6 (CP023404.1)	NA	China	98.29	100	100
<i>E. anophelis</i> SUE (CP034247.1)	Blood	Taiwan	94.16	99.93	99.58
<i>E. anophelis</i> FDAARGOS 198 (CP023010.2)	Blood	Sweden	93.28	99.74	99.53
<i>E. anophelis</i> FDAARGOS 132 (CP014020.1)	Endotracheal aspirate	USA	93.84	99.93	99.53
<i>E. anophelis</i> FDAARGOS 134 (CP014021.1)	Endotracheal aspirate	USA	93.84	99.93	99.53
<i>E. anophelis</i> JM-87 (CP016372.1)	NA	USA	87.74	99.34	99.19
<i>E. meningoseptica</i> CCUG 214 (FLSV01000007.1)	NA	NA	98.24	100	100
<i>E. meningoseptica</i> CIP111048 (FTPF01000007.1)	NA	NA	95.35	99.74	99.82
<i>E. meningoseptica</i> SQ101 (JADRJH010000001.1)	NA	China	94.09	99.74	99.82
<i>E. meningoseptica</i> 58-80 CIP80.33 (FTRA01000026.1)	Tracheal exudate	NA	96.08	99.74	99.92
<i>E. meningoseptica</i> NV2016 (FRFB01000010.1)	NA	NA	97.51	99.87	99.87
<i>E. meningoseptica</i> ATCC 13253 (ASAN01000025.1)	NA	NA	98.18	100	100
<i>E. meningoseptica</i> EM1 (MCJH01000009.1)	Blood	NA	96.02	99.74	99.82
<i>E. meningoseptica</i> EM2 (MDTZ01000014.1)	Trachea	USA	95.35	99.8	99.84
<i>E. meningoseptica</i> EM3 (MDTY01000010.1)	Trachea	NA	96.02	99.74	99.82
<i>E. meningoseptica</i> EM4 (JACLGJ010000016.1)	NA	China	93.98	99.74	99.82
<i>E. meningoseptica</i> EM5 (JACLGJ010000016.1)	NA	China	94.07	99.74	99.82
<i>E. meningoseptica</i> EM6 (JACLGK010000019.1)	NA	China	94.07	99.74	99.82

<i>E. meningoseptica</i> EM7 (JACLGL010000016.1)	NA	China	94.07	99.74	99.82
<i>E. meningoseptica</i> EM8 (JACLG010000016.1)	NA	China	94.07	99.74	99.82
<i>E. meningoseptica</i> EM9 (JACLGN010000018.1)	NA	China	94.07	99.74	99.82
<i>E. meningoseptica</i> EM10 (JACLFQ010000014.1)	NA	China	93.62	99.74	99.82
<i>E. meningoseptica</i> EM11 (JACLFR010000017.1)	NA	China	94.07	99.74	99.82
<i>E. meningoseptica</i> EM12 (JACLFS010000017.1)	NA	China	94.07	99.74	99.82
<i>E. meningoseptica</i> EM13 (JACLFT010000017.1)	NA	China	94.07	99.74	99.82
<i>E. meningoseptica</i> EM14 (JACLFU010000017.1)	NA	China	94.07	99.74	99.82
<i>E. meningoseptica</i> EM15 (JACLFV010000017.1)	NA	China	94.07	99.74	99.82
<i>E. meningoseptica</i> EM16 (JACLFW010000016.1)	NA	China	93.62	99.74	99.82
<i>E. meningoseptica</i> EM17 (JACLFX010000016.1)	NA	China	93.62	99.74	99.82
<i>E. meningoseptica</i> EM18 (JACLFY010000009.1)	NA	China	95.44	99.74	99.82
<i>E. meningoseptica</i> EM19 (JACLFZ010000015.1)	NA	China	93.62	99.74	99.82
<i>E. meningoseptica</i> EM20 (JACLGB010000016.1)	NA	China	93.98	99.74	99.82
<i>E. meningoseptica</i> EM21 (JACLGC010000016.1)	NA	China	93.98	99.74	99.82
<i>E. meningoseptica</i> EM22 (JACLGD010000017.1)	NA	China	93.62	99.74	99.82
<i>E. meningoseptica</i> EM23 (JACLGE010000016.1)	NA	China	93.62	99.74	99.82
<i>E. meningoseptica</i> EM24 (JACLGF010000015.1)	NA	China	93.98	99.74	99.82
<i>E. meningoseptica</i> CSID 3000515919 (MAGZ01000024.1)	NA	USA	96.39	99.87	99.74
<i>E. meningoseptica</i> CSID 3000516359 (MAHC01000017.1)	NA	USA	96.09	99.74	99.82
<i>E. meningoseptica</i> CSID 3000516465 (MAHE01000019.1)	NA	USA	95.52	99.8	99.84
<i>E. meningoseptica</i> CSID 3000516535 (MAHF01000018.1)	NA	USA	95.53	99.8	99.82
<i>E. meningoseptica</i> CSID 3000516977 (MAHI01000014.1)	NA	USA	97.54	100	99.87

<i>E. meningoseptica</i> G4076 (MAHZ01000008.1)	NA	United Kingdom	98.24	99.87	100
<i>E. meningoseptica</i> G4120 (MAIA01000008.1)	NA	France	95.51	99.74	99.82
<i>E. meningoseptica</i> 61421 PRCM (MPOG01000006.1)	NA	China	95.41	99.74	99.82
<i>E. meningoseptica</i> GX196 (SYWC01000018.1)	Blood	China	97.58	99.87	99.87
<i>E. meningoseptica</i> NCTC10016 (LS483376.1)	NA	NA	98.28	100	100
<i>E. meningoseptica</i> KC1913 (CP014338.1)	Cerebrospinal fluid	USA	98.3	100	100
<i>E. miricola</i> CIP111047 (FTQX01000011.1)	NA	NA	77.27	100	99.58
<i>E. miricola</i> LDVH-337.01 (CIP108653.1)	Spleen	France	96.07	99.86	99.22
<i>E. miricola</i> IMT47538 (JAAOKX010000023.1)	NA	Germany	96.18	99.86	99.22
<i>E. miricola</i> IMT47318 (JAAOKZ010000034.1)	NA	Germany	95.94	99.86	99.22
<i>E. miricola</i> KCTC 12492 (FLSS01000007.1)	NA	NA	98.3	100	100
<i>E. miricola</i> EM CHUV (LIQC01000021.1)	Endotracheal secretions	Switzerland	72.42	99.93	99.16
<i>E. miricola</i> G4071 (LNOI01000009.1)	Tracheal exudate	France	77.12	100	99.58
<i>E. miricola</i> GTC 862 (LSGQ01000005.1)	NA	NA	98.3	100	100
<i>E. miricola</i> CSID 3000517120 (MAGX01000007.1)	NA	USA	92.58	99.44	99.22
<i>E. miricola</i> CSID 3000516464 (MAHD01000012.1)	NA	USA	78.4	99.51	99.29
<i>E. miricola</i> CSID 3000516998 (MAHK01000017.1)	NA	USA	75.21	99.44	99.61
<i>E. miricola</i> NCTC11305 (UARN01000011.1)	NA	NA	76.88	100	99.58
<i>E. miricola</i> G4074 (MAHY01000011.1)	NA	United Kingdom	77.18	100	99.58
<i>E. miricola</i> Mir-N11 (CP090369.1)	NA	China	93.04	99.86	99.22
<i>E. miricola</i> FL160902 (CP040516.1)	Farming pond	China	93.05	99.86	99.22
<i>E. miricola</i> G4121 (MAIB01000003.1)	NA	Sweden	78.21	100	99.58
<i>E. bruuniana</i> EM798-26 (CP023746.1)	Blood	Taiwan	91.82	99.86	98.98

<i>E. bruuniana</i> BM10 (CP011059.1)	Hindgut	South Korea	81.79	99.51	99.03
<i>E. bruuniana</i> 6012926 (QNTX01000006.1)	Blood	USA	90.23	99.86	99.06
<i>E. bruuniana</i> CSID 3000516589 (MAHG01000002.1)	NA	USA	91.51	99.6	99.48
<i>E. bruuniana</i> CSID 3015183685 (MAHQ01000008.1)	NA	USA	91.67	99.87	99.27
<i>E. bruuniana</i> FDAARGOS 1031 (CP067018.1)	NA	USA	97.7	100	100
<i>E. bruuniana</i> G0153 (MAHW01000018.1)	NA	Ireland	91.22	99.6	99.24
<i>E. bruuniana</i> G0146 (CP014337.1)	NA	United Kingdom	98.3	100	100
<i>E. bruuniana</i> ATCC 33958 (CP035811.1)	Contaminated preparation of carboxypeptidase A	USA	97.57	100	99.97
<i>E. bruuniana</i> G4075 (LNOJ01000023.1)	Blood	France	98.18	100	100
<i>E. ursingii</i> G4122 (LNOK01000023.1)	Soil	Denmark	98.3	100	100
<i>E. ursingii</i> G4123 (CP016377.1)	NA	Denmark	89.78	99.93	99.32
<i>E. ursingii</i> C1558 (MBDS01000012.1)	NA	NA	86.96	99.86	99.4
<i>E. ursingii</i> CSID 3000516135 (MAHB01000010.1)	NA	USA	88.34	100	99.53
<i>E. occulta</i> G4070 (MAHX01000006.1)	NA	Australia	98.3	100	100
<i>E. occulta</i> F8124 (MBDR01000015.1)	NA	NA	97.45	99.6	100
<i>E. argenteiflava</i> YB22 (JAAABJ010000676.1)	Pods	South Korea	98.3	100	100

16S rRNA, 16S ribosomal RNA.

rpoB, RNA polymerase β -subunit.

iDDH, in silico DNA-DNA hybridization.

NA, not available

Table S2. *Elizabethkingia* strains, isolation source, isolation country, and similarity of 16S rRNA gene to *E. anophelis* subsp. *endophytica* type strain JM-87 .

Strain (GenBank accession no.)	Isolation source	Isolation country	16S rRNA similarity (%)
<i>E. anophelis</i> subsp. <i>endophytica</i> JM-87 (CP016372.1)	NA	USA	100
<i>E. anophelis</i> 502 (AVCQ01000002.1)	Wound swab	United Kingdom	99.93
<i>E. anophelis</i> B2D (JNCG01000001.1)	Dental plaque	Malaysia	100
<i>E. anophelis</i> CIP111046 (FTRB01000010.1)	NA	NA	99.93
<i>E. anophelis</i> CIP60.58 (FTQY01000009.1)	NA	NA	99.34
<i>E. anophelis</i> CSID 3000516978 (MAHJ01000016.1)	NA	USA	100
<i>E. anophelis</i> CSID 3000517066 (MAHL01000016.1)	NA	USA	100
<i>E. anophelis</i> CSID 3000653323 (NWMM01000008.1)	Blood	USA	100
<i>E. anophelis</i> CSID 3000726633 (NWMH01000004.1)	Blood	USA	100
<i>E. anophelis</i> CSID 3000726811 (NWMH01000002.1)	Urine	USA	100
<i>E. anophelis</i> F3201 (CP016374.1)	NA	Kuwait	99.93
<i>E. anophelis</i> OSUVM1 (PJMA01000002.1)	Equine stall	USA	100
<i>E. anophelis</i> PHOL-537 (RSAX01000013.1)	Urine	Canada	99.93
<i>E. anophelis</i> PHOL-785 (RSAX01000007.1)	Endoscopy specimen	Canada	99.93
<i>E. anophelis</i> PW2809 (CBYE010000030.1)	NA	NA	99.27
<i>E. anophelis</i> PW2810 (CBYF010000021.1)	NA	NA	99.93
<i>E. anophelis</i> SEA01 (CP069277.1)	Blood	India	98.29

NA, not available.

Figure S1. Phylogenetic analysis derived from of the 16S rRNA gene sequences (A) and complete *rpoB* gene sequences (B) in 173 *Elizabethkingia* strains by the maximum-likelihood method based on the Jukes-Cantor model (JC69). The percentage of replicate trees in which the associated taxa clustered together in the bootstrap test of 1000 replicates and branch lengths of the evolutionary distances are shown.