

**Supplementary Table 3.** List of the pili-encoding genes used for the phylogenetic analyses .

Organism	Gene function	Accession number
<i>Bifidobacterium animalis</i> subsp. <i>lactis</i> DSM 10140	Cell surface protein fimA fimbrial subunit	ACS48397.1
<i>Bifidobacterium animalis</i> subsp. <i>lactis</i> AD011	Possible cell surface protein	ACL28972.1
<i>Bifidobacterium adolescentis</i> ATCC 15703	Cell surface protein fimA fimbrial subunit	YP_910330.1
<i>Bifidobacterium dentium</i> Bd1	Cell surface protein	YP_003361571.1
<i>Bifidobacterium dentium</i> Bd1	Surface protein with Cna protein B-type domain	YP_003360030.1
<i>Bifidobacterium dentium</i> Bd1	Fimbrial subunit-like cell surface protein	YP_003359706.1
<i>Bifidobacterium bifidum</i> PRL2010	Fimbrial subunit <i>fimA</i>	YP_003970445.1
<i>Bifidobacterium dentium</i> Bd1	Cell surface protein	YP_003361281.1
<i>Bifidobacterium dentium</i> Bd1	LPXTG cell wall surface protein,	YP_003361282.1
<i>Bifidobacterium longum</i> subsp. <i>longum</i> DJO10A	Fimbrial subunit <i>fimA</i>	ZP_00121141.2
<i>Bifidobacterium bifidum</i> PRL2010	Cell surface protein	YP_003971869.1
<i>Bifidobacterium longum</i> subsp. <i>longum</i> NCC2705	Fimbrial subunit <i>fimA</i>	NP_695860.1
<i>Streptococcus sanguinis</i> SK36	<i>fimA</i> fimbrial subunit-like protein, putative	ABN45021.1
<i>Bifidobacterium dentium</i> Bd1	Sortase-anchored surface protein	YP_003359781.1
<i>Bifidobacterium dentium</i> Bd1	Fimbrial subunit	YP_003361396.1
<i>Actinomyces odontolyticus</i>	Type-2 fimbrial major subunit precursor	ABD84025.1
<i>Actinomyces naeslundii</i>	Fimbrial structural subunit	AAC13545.1
<i>Arthrobacter arilaitensis</i> Re117	Putative fimbrial structural subunit	CBT74507.1
<i>B. dentium</i> Bd1	Collagen adhesin precursor	YP_003361570.1
<i>Ruminococcus flavefaciens</i> FD-1	Fimbrial subunit <i>fimA</i>	ZP_06142946.1
<i>B. bifidum</i> PRL2010	Fimbrial subunit <i>fimA</i>	YP_003970445.1
<i>Bacteroides stercoris</i> ATCC 43183	Major fimbrial subunit protein ( <i>fimA</i> )	ZP_02436541.1
<i>Bacteroides intestinalis</i> DSM 17393	Major fimbrial subunit protein ( <i>fimA</i> )	EDV04845.1
<i>Porphyromonas endodontalis</i> ATCC 35406	fimbrillin	EEN83125.1
<i>Odoribacter denticanis</i>	Fimbrial subunit <i>fimA</i>	AAT76446.1
<i>Streptococcus parasanguinis</i>	Adhesin specific for salivary pellicle of dental surfaces	AAA53077.1
<i>Francisella philomiragia</i> subsp. <i>philomiragia</i> ATCC 25017	Fimbrial subunit <i>fimA</i>	ABZ87973.1
<i>Pasteurella multocida</i> subsp. <i>multocida</i> str. <i>Pm70</i>	Fimbrial subunit <i>fimA</i>	AAK03010.1
<i>Bordetella petrii</i>	Putative fimbrial adhesin	CAP44477
<i>Serratia marcescens</i>	Fimbrial subunit <i>fimA</i>	AAW62392.1
<i>Edwardsiella tarda</i>	Major fimbrial subunit protein	ABK57119.1
<i>Edwardsiella ictaluri</i>	Putative major fimbrial subunit protein	AAT41671.1
<i>Pantoea vagans</i> C9-1	Type-1 fimbrial protein, A chain precursor	YP_003933538.1
<i>Salmonella enterica</i> subsp. <i>enterica</i> serovar <i>Typhi</i> str. J185	Fimbrial protein	ZP_03380023.1
<i>Salmonella enterica</i> subsp. <i>enterica</i> serovar <i>Typhimurium</i>	Putative fimbrial subunit A	AAF21713.1
<i>Enterobacter cloacae</i> subsp. <i>cloacae</i> ATCC 13047	P pilus assembly protein, pilin <i>fimA</i>	ADF59657.1
<i>Yersinia rohdei</i> ATCC 43380	P pilus assembly protein, pilin <i>fimA</i>	EEQ04210.1
<i>Pseudomonas syringae</i> pv. <i>tomato</i> Max13	Type I pilus biogenesis protein <i>fimA</i>	ZP_07232260.1
<i>Xylella fastidiosa</i> subsp. <i>fastidiosa</i> GB514	Fimbrial protein	ADN63049.1
<i>Klebsiella pneumoniae</i> 342	Type-1 fimbrial protein	ACI10061
<i>Burkholderia multivorans</i> ATCC 17616	Major type 1 subunit fimbrin	BAG43555.1
<i>Burkholderia cenocepacia</i> AU 1054	Fimbrial protein	ABF76053.1
<i>Burkholderia mallei</i> ATCC 10399	Fimbrial subunit <i>fimA</i>	EDP89455.1
<i>Yersinia aldovae</i> ATCC 35236	Fimbrial protein	EEP93769.1
<i>Escherichia coli</i>	<i>fimA</i> precursor	CAA85727.1
<i>Shigella boydii</i> Sb227	Major type 1 subunit fimbrin	ABB68780.1
<i>Klebsiella pneumoniae</i> subsp. <i>pneumoniae</i> MGH 78578	Major type 1 subunit fimbrin (pilin)	YP_001336915.1
<i>Klebsiella pneumoniae</i>	Fimbrial subunit <i>fimA</i>	ACV60168.1
<i>Erwinia tasmaniensis</i> Et1/99	Type-1 fimbrial protein, FimA	CAO97915.1
<i>Salmonella enterica</i> subsp. <i>enterica</i> serovar <i>Typhi</i> str. Ty2	Type-1 fimbrial protein subunit A	NP_806054.1
<i>Salmonella enterica</i> subsp. <i>indica</i>	Major pilin protein <i>fimA</i>	AAD23947.1
<i>Haemophilus ducreyi</i> 35000HP	Fimbrial major pilin protein	NP_872871.1
<i>Pectobacterium carotovorum</i> subsp. <i>carotovorum</i> WPP14	Fimbriae major subunit protein	ZP_03832453.1
<i>Yersinia bercovieri</i> ATCC 43970	P pilus assembly protein, pilin FimA	EEQ06994.1
<i>Serratia odorifera</i> 4Rx13	Type-1 fimbrial protein, A chain	EDU17402.1
<i>Providencia stuartii</i> ATCC 25827	Pilus assembly protein, pilin <i>fimA</i>	EDU57522.1
<i>Yersinia intermedia</i> ATCC 29909	P pilus assembly protein, pilin <i>fimA</i>	EEQ19614.1
<i>Salmonella enterica</i> subsp. <i>enterica</i> serovar <i>Typhi</i> str. J185	Fimbrial subunit	ZP_03379271.1
<i>Cronobacter sakazakii</i> ATCC BAA-894	Pilus assembly protein, pilin <i>fimA</i>	ABU76251.1
<i>Pseudomonas fluorescens</i> PF-5	Type I pilus biogenesis protein <i>fimA</i>	AAV90745.1
<i>Pseudomonas aeruginosa</i> PA7	Type I pilus biogenesis protein <i>fimA</i>	ABR83321.1
<i>Pantoea ananatis</i> LMG 20103	Fimbrial subunit <i>fimA</i>	ADD76691.1
<i>Xenorhabdus nematophila</i> ATCC 19061	Putative Fimbrial subunit (pilin)	CBJ89795.1
<i>Burkholderia glumae</i> BGR1	P pilus assembly protein, pilin <i>fimA</i>	ACR30627.1

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<i>Burkholderia dolosa</i> AUO158	P pilus assembly protein pilin <i>fimA</i>	EAY67592.1
<i>Yersinia frederiksenii</i> ATCC 33641	P pilus assembly protein, pilin <i>fimA</i>	EEQ12942.1
<i>Cupriavidus metallidurans</i> CH34	Fimbrial protein	ABF08548.1
<i>Cupriavidus taiwanensis</i>	Major type 1 subunit fimbrin (pilin)	CAQ72393.1
<i>Bordetella bronchiseptica</i>	Putative major fimbrial structural subunit	AAB94076.1
<i>Yersinia bercovieri</i> ATCC 43970	P pilus assembly protein, pilin <i>FimA</i>	ZP_04627370.1
<i>Pseudomonas putida</i> GB-1	Fimbrial protein	ABY97371.1
<i>Burkholderia ubonensis</i> Bu	Type I pilus biogenesis protein <i>FimA</i>	ZP_02379636.1
<i>Pseudomonas aeruginosa</i> PAb1	Putative fimbrial protein	ZP_06881617.1
<i>Yersinia pestis</i> FV-1	Fimbrial protein	ZP_02332403.1
<i>Haemophilus influenzae</i> PittGG	Putative F17-like fimbrial subunit	YP_001293149.1
<i>Yersinia mollaretii</i> ATCC 43969	P pilus assembly protein, pilin <i>FimA</i>	ZP_04639781.1
<i>Deinococcus radiodurans</i> R1	Adhesin B	NP_296243.1
<i>Photobacterium profundum</i> 3TCK	Pilus assembly protein, pilin <i>FimA</i>	EAS44350.1
<i>Parabacteroides distasonis</i> ATCC 8503	Putative fimbrilin precursor	ABR45199.1
<i>Bacteroides eggerthii</i> DSM 20697	Fimbrial subunit <i>fimA</i>	EEC55246.1
<i>Bacillus subtilis</i>	YcdI	BAA22247.1
<i>Bordetella parapertussis</i>	Putative major fimbrial structural subunit	AAB94079.1
<i>Dichelobacter nodosus</i>	Fimbrial subunit AC6	AAA23337.1
<i>Ktedonobacter racemifer</i> DSM 44963	Putative peptidoglycan binding domain	EFH87082.1
<i>Thermomicrobium roseum</i> DSM 5159	Major pilin protein <i>fimA</i>	ACM06830.1
<i>Thermoanaerobacter wiegelii</i> Rt8.B1	Putative peptidoglycan binding domain	EFN47949.1
<i>Coprothermobacter proteolyticus</i> DSM 5265	Major pilin protein <i>fimA</i>	ACI17737.1
<i>Thermus thermophilus</i> HB27	Major pilin protein <i>fimA</i>	AAS81862.1
<i>Providencia rettgeri</i> DSM 1131	Major pilin protein <i>fimA</i>	ZP_06125206.1
<i>Bacteroides cellulosilyticus</i> DSM 14838	Fimbrial subunit <i>fimA</i>	EEF88619.1
<i>Drosophila fimA</i>	amylase	AAC47377.1

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