Supplementary Table S2. Comparison of amino acid sequences from pilin accessory proteins found in the genomes of e-pilin harboring organisms to accessory proteins from such well-characterized species as *Neisseria gonorrhoeae*, *Escherichia coli, Pseudomonas aeruginosa*, and *Myxococcus fulvus*. Percent identity and percent similarity values were generated with the BLASTp algorithm. If query coverage was lower than 65%, similarity values were not included in the table and these cells were given a grey background. NA indicates that a homologous gene was not detected in the specified genome.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Geobacter sulfurreducens | Locus ID | % iden/sim  N. gonorrhoeae | % iden/sim  E. coli | % iden/sim  P. aeruginosa | % iden/sim  M. fulvus |
| pilV | GSU1063 |  |  |  | NA |
| pilW | GSU1064 |  | NA |  | NA |
| pilX | GSU1065 |  |  |  | NA |
| pilY1 | GSU1066 |  | NA |  |  |
| pilB | GSU1491 | 44/64 | 46/66 | 45/66 | 65/83 |
| pilT | GSU1492 | 48/67 |  | 51/67 | 50/69 |
| pilC | GSU1493 |  | 30/53 | 41/62 | 60/76 |
| pilS | GSU1494 |  |  | 27/43 | 35/53 |
| pilR | GSU1495 |  |  | 43/62 | 48/65 |
| pilQ | GSU2028 | 33/49 |  |  | 35/52 |
| pilP | GSU2029 |  |  |  |  |
| pilO | GSU2030 | 26/48 |  |  | 33/56 |
| pilN | GSU2031 | 22/43 |  |  |  |
| pilM | GSU2032 | 26/46 |  |  | 52/72 |
| pilD | GSU2043 | 36/55 | 34/53 | 41/58 | 41/62 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Pelobacter carbinolicus | Locus ID | % iden/sim  N. gonorrhoeae | % iden/sim  E. coli | % iden/sim  P. aeruginosa | % iden/sim  M. fulvus |
| pilV | Pcar\_2158 |  |  |  | NA |
| pilW | Pcar\_2157 |  | NA | 37/66 | NA |
| pilX | Pcar\_2156 | 25/39 |  |  | NA |
| pilY1 | Pcar\_2155 |  | NA |  |  |
| pilB | Pcar\_2149 | 42/64 | 43/64 | 45/66 | 65/83 |
| pilT | Pcar\_2148 | 46/63 |  | 51/67 | 49/67 |
| pilC | Pcar\_2147 |  | 28/48 | 44/63 | 61/75 |
| pilS | Pcar\_2146 |  |  | 27/45 | 34/53 |
| pilR | Pcar\_2145 |  |  | 42/61 | 46/62 |
| pilQ | Pcar\_2134 | 32/48 |  |  | 30/46 |
| pilP | Pcar\_2135 |  |  |  | 37/52 |
| pilO | Pcar\_2136 | 24/51 |  |  | 32/55 |
| pilN | Pcar\_2137 | 26/48 |  |  |  |
| pilM | Pcar\_2138 | 25/44 |  |  | 47/68 |
| pilD | Pcar\_2139 | 37/54 | 33/52 | 35/55 | 38/62 |

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| --- | --- | --- | --- | --- | --- |
| *Geobacter metallireducens* | Locus ID | % iden/sim  N. gonorrhoeae | % iden/sim  E. coli | % iden/sim  P. aeruginosa | % iden/sim  M. fulvus |
| pilV | Gmet\_0734 |  |  |  | NA |
| pilW | Gmet\_0735 |  | NA |  | NA |
| pilX | Gmet\_0736 |  |  |  | NA |
| pilY1 | Gmet\_0737 |  | NA |  |  |
| pilB | Gmet\_1393 | 44/65 | 46/65 | 45/66 | 65/83 |
| pilT | Gmet\_1394 | 48/67 |  | 51/68 | 49/68 |
| pilC | Gmet\_1395 |  | 30/52 | 41/62 | 62/77 |
| pilS | Gmet\_1396 |  |  | 27/45 | 36/53 |
| pilR | Gmet\_1397 |  |  | 44/62 | 49/66 |
| pilQ | Gmet\_0975 | 31/49 |  |  | 35/52 |
| pilP | Gmet\_0974 |  |  |  |  |
| pilO | Gmet\_0973 | 30/50 |  |  | 31/52 |
| pilN | Gmet\_0972 | 25/45 |  |  |  |
| pilM | Gmet\_0971 | 25/44 |  |  | 51/70 |
| pilD | Gmet\_0959 | 37/54 | 33/51 | 40/55 | 39/61 |

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| --- | --- | --- | --- | --- | --- |
| *Desulfobacterium autotrophicum* | Locus ID | % iden/sim  N. gonorrhoeae | % iden/sim  E. coli | % iden/sim  P. aeruginosa | % iden/sim  M. fulvus |
| pilV | HRM2\_27670 |  |  | 31/69 | NA |
| pilW | HRM2\_27680 | 28/62 | NA |  | NA |
| pilX | HRM2\_27660 |  |  | 17/34 | NA |
| pilY1 | HRM2\_27650 |  | NA | 23/34 | 23/35 |
| pilB | HRM2\_23080 | 40/61 | 42/60 | 40/60 | 46/64 |
| pilC | HRM2\_22330 |  | 28/49 | 40/61 | 55/70 |
| pilT | HRM2\_04990 | 52/72 |  | 58/74 | 46/65 |
| pilS | HRM2\_10980 |  |  |  |  |
| pilR | HRM2\_10970 |  |  | 39/58 | 42/58 |
| pilQ | HRM2\_11030 |  |  |  | 32/51 |
| pilP | HRM2\_11020 | 28/41 |  |  |  |
| pilO | HRM2\_11010 | 30/50 |  |  | 30/52 |
| pilN | HRM2\_11000 | 27/50 |  |  | 28/53 |
| PilM | HRM2\_10990 | 22/41 |  |  | 33/57 |
| pilD | HRM2\_30410 | 34/50 | 33/49 | 34/49 | 36/57 |

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| --- | --- | --- | --- | --- | --- |
| *Desulfobotulus sapovorans* | Locus ID | % iden/sim  N. gonorrhoeae | % iden/sim  E. coli | % iden/sim  P. aeruginosa | % iden/sim  M. fulvus |
| pilV | BR04DRAFT\_02178 |  |  |  | NA |
| pilW | BR04DRAFT\_02177 |  | NA |  | NA |
| pilX | BR04DRAFT\_02176 |  |  |  | NA |
| pilY1 | BR04DRAFT\_02174 |  | NA |  |  |
| pilB | BR04DRAFT\_02193 | 37/57 | 34/52 | 38/55 | NA |
| pilT | BR04DRAFT\_00210 | 53/72 |  | 52/75 | 48/64 |
| pilC | BR04DRAFT\_02614 |  |  |  |  |
| pilS | BR04DRAFT\_01794 |  |  |  |  |
| pilR | BR04DRAFT\_01795 |  |  | 43/60 | 42/59 |
| pilQ | BR04DRAFT\_01789 |  |  |  | 33/49 |
| pilP | BR04DRAFT\_01790 |  |  |  |  |
| pilO | BR04DRAFT\_01791 | 19/39 |  |  | 29/48 |
| pilN | BR04DRAFT\_01792 | 23/42 |  |  |  |
| pilM | BR04DRAFT\_01793 | 21/43 |  |  | 40/60 |

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| --- | --- | --- | --- | --- | --- |
| *Desulfobotulus alkaliphilus* | Locus ID | % iden/sim  N. gonorrhoeae | % iden/sim  E. coli | % iden/sim  P. aeruginosa | % iden/sim  M. fulvus |
| pilV | LZ24DRAFT\_01832 |  |  |  | NA |
| pilW | LZ24DRAFT\_01831 |  | NA |  | NA |
| pilX | LZ24DRAFT\_01830 |  |  |  | NA |
| pilY1 | LZ24DRAFT\_01833 |  | NA | 27/40 |  |
| pilB | LZ24DRAFT\_00346 | 37/55 | 41/58 | 38/57 | NA |
| pilT | LZ24DRAFT\_01987 | 46/67 |  | 49/69 | 44/63 |
| pilC | LZ24DRAFT\_00347 |  | 27/48 | 25/53 | 28/53 |
| pilS | LZ24DRAFT\_01063 |  |  |  |  |
| pilR | LZ24DRAFT\_01064 |  |  | 41/61 | 41/58 |
| pilQ | LZ24DRAFT\_01057 | 35/54 |  |  | 34/51 |
| pilP | LZ24DRAFT\_01058 |  |  |  |  |
| pilO | LZ24DRAFT\_01059 | 19/38 |  |  | 26/46 |
| pilN | LZ24DRAFT\_01060 | 24/44 |  |  |  |
| pilM | LZ24DRAFT\_01061 | 22/43 |  |  | 39/58 |
| pilD | LZ24DRAFT\_01979 | 38/55 | 33/52 | 37/56 | 40/60 |

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| --- | --- | --- | --- | --- | --- |
| *Thauera linaloolentis* | Locus ID | % iden/sim  N. gonorrhoeae | % iden/sim  E. coli | % iden/sim  P. aeruginosa | % iden/sim  M. fulvus |
| pilV | C666\_05435 |  |  |  | NA |
| pilW | C666\_05440 |  | NA |  | NA |
| pilX | C666\_05445 |  |  |  | NA |
| pilY1 | C666\_05450 |  | NA | 34/48 |  |
| pilB | C666\_04895 | 52/68 | 38/57 | 54/71 | NA |
| pilT | C666\_06340 | 72/84 |  | 78/89 | 52/68 |
| pilC | C666\_04900 |  | 29/51 | 54/74 | 40/62 |
| pilS | C666\_00260 |  |  | 34/49 | 28/46 |
| pilR | C666\_00255 |  |  | 58/71 | 39/56 |
| pilQ | C666\_15955 |  |  |  |  |
| pilP | C666\_08645 | 34/51 |  |  |  |
| pilO | C666\_08640 | 32/54 |  |  | 31/53 |
| pilN | C666\_08635 | 31/53 |  |  |  |
| pilM | C666\_08630 | 27/48 |  |  | 33/57 |
| pilD | C666\_04905 |  |  |  |  |

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| --- | --- | --- | --- | --- | --- |
| *Thauera terpenica* | Locus ID | % iden/sim  N. gonorrhoeae | % iden/sim  E. coli | % iden/sim  P. aeruginosa | % iden/sim  M. fulvus |
| pilV | M622\_01610 |  |  | 25/46 | NA |
| pilW | M622\_01605 |  | NA |  | NA |
| pilX | M622\_01600 |  |  |  | NA |
| pilY1 | M622\_01595 |  | NA |  |  |
| pilB | M622\_11740 | 54/71 | 44/62 | 54/71 | 45/65 |
| pilT | M622\_11340 |  |  |  |  |
| pilC | M622\_11745 |  | 29/49 | 52/72 | 38/61 |
| pilS | M622\_13930 |  |  | 34/51 | 27/45 |
| pilR | M622\_13925 |  |  | 59/73 | 39/57 |
| pilQ | M622\_00030 |  |  |  |  |
| pilP | M622\_00040 | 35/51 |  |  |  |
| pilO | M622\_00045 | 29/51 |  |  | 31/56 |
| pilN | M622\_00050 | 32/51 |  |  |  |
| pilM | M622\_00055 | 24/47 |  |  | 32/57 |
| pilD | M622\_11750 | 47/61 | 52/67 | 61/71 | 35/50 |

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| --- | --- | --- | --- | --- | --- |
| *Thauera humireducens* | Locus ID | % iden/sim  N. gonorrhoeae | % iden/sim  E. coli | % iden/sim  P. aeruginosa | % iden/sim  M. fulvus |
| pilV | WP\_048709381.1 |  |  |  | NA |
| pilW | WP\_048709383.1 |  | NA | 23/37 | NA |
| pilX | WP\_048710599.1 |  |  |  | NA |
| pilY1 | WP\_048709385.1 |  | NA | 31/43 |  |
| pilB | WP\_048705994 | 52/69 | 39/57 | 54/71 | 47/67 |
| pilT | WP\_048706607.1 | 38/57 |  | 42/60 | 44/65 |
| pilC | WP\_038011757.1 |  | 29/51 | 54/73 | 41/62 |
| pilS | WP\_048706145.1 |  |  | 33/50 | 27/45 |
| pilR | WP\_048706143.1 |  |  |  |  |
| pilQ | WP\_048710322.1 | 36/54 |  |  | 33/51 |
| pilP | WP\_004253787.1 | 34/52 |  |  | 28/50 |
| pilO | WP\_038010918.1 | 32/52 |  |  | 29/53 |
| pilN | WP\_004253781.1 | 33/51 |  |  | 32/56 |
| pilM | WP\_004253778 | 25/47 |  |  | 34/55 |
| pilD | WP\_048705996.1 | 51/66 | 49/65 | 60/70 | 36/50 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| *Flexistipes sinusarabici* | Locus ID | % iden/sim  N. gonorrhoeae | % iden/sim  E. coli | % iden/sim  P. aeruginosa | % iden/sim  M. fulvus |
| pilV | Flexsi\_0849 |  |  |  | NA |
| pilW | Flexsi\_0850 |  | NA |  | NA |
| pilX | Flexsi\_0851 |  |  |  | NA |
| pilY1 | Flexsi\_0847 |  | NA |  |  |
| pilB | Flexsi\_1222 | 42/63 | 45/63 | 45/64 | 59/75 |
| pilT | Flexsi\_1221 | 51/68 |  | 48/66 | 50/68 |
| pilC | Flexsi\_1220 |  |  | 40/63 | 46/65 |
| pilS | Flexsi\_1214 |  |  |  |  |
| pilR | Flexsi\_1215 |  |  | 36/57 | 31/54 |
| pilQ | Flexsi\_0514 |  |  |  | 28/47 |
| pilP | Flexsi\_0513 |  |  |  | 0 |
| pilO | Flexsi\_0512 | 21/46 |  |  | 22/50 |
| pilN | Flexsi\_0511 | 27/52 |  |  | 23/48 |
| pilM | Flexsi\_0510 | 22/43 |  |  | 33/55 |
| no pilD |  |  |  |  |  |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| *Hippea maritima* | Locus ID | % iden/sim  N. gonorrhoeae | % iden/sim  E. coli | % iden/sim  P. aeruginosa | % iden/sim  M. fulvus |
| pilV | Hipma\_1087 | 21/45 |  |  | NA |
| pilW | Hipma\_1086 |  | NA |  | NA |
| no pilX |  |  |  |  |  |
| pilY1 | Hipma\_1089 |  | NA |  |  |
| pilB | Hipma\_0476 | 44/65 | 45/65 | 44/66 | 52/73 |
| pilT | Hipma\_0475 | 51/69 | 0 | 50/66 | 48/67 |
| pilC | Hipma\_0474 |  | 29/51 | 36/62 | 41/64 |
| no pilS |  |  |  |  |  |
| no pilR |  |  |  |  |  |
| pilQ | Hipma\_1185 |  |  |  | 28/47 |
| pilP | Hipma\_1186 |  |  |  |  |
| pilO | Hipma\_1187 | 23/41 |  |  |  |
| pilN | Hipma\_1188 | 0 |  |  |  |
| pilM | Hipma\_1189 | 20/40 |  |  | 29/50 |
| pilD | Hipma\_0610 | 33/52 | 31/49 | 30/50 | 42/61 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| *Hippea alviniae* | Locus ID | % iden/sim  N. gonorrhoeae | % iden/sim  E. coli | % iden/sim  P. aeruginosa | % iden/sim  M. fulvus |
| pilV | G415DRAFT\_0791 | 24/43 |  |  | NA |
| pilW | G415DRAFT\_0790 |  | NA |  | NA |
| no pilX |  |  |  |  |  |
| pilY1 | G415DRAFT\_0793 |  | NA |  |  |
| pilB | G415DRAFT\_0938 | 44/65 | 41/61 | 45/66 | 50/73 |
| pilT | G415DRAFT\_0937 | 51/67 |  | 51/66 | 47/67 |
| pilC | G415DRAFT\_0936 |  | 31/51 | 37/63 | 41/64 |
| no pilS |  |  |  |  |  |
| no pilR |  |  |  |  |  |
| pilQ | G415DRAFT\_0173 |  |  |  | 33/52 |
| pilP | G415DRAFT\_0172 |  |  |  |  |
| pilO | G415DRAFT\_0171 | 25/40 |  |  |  |
| pilN | G415DRAFT\_0170 |  |  |  |  |
| pilM | G415DRAFT\_0169 | 22/48 |  |  | 25/48 |
| pilD | G415DRAFT\_0998 | 33/52 | 31/52 | 38/55 | 36/58 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| *Deferribacter desulfuricans* | Locus ID | % iden/sim  N. gonorrhoeae | % iden/sim  E. coli | % iden/sim  P. aeruginosa | % iden/sim  M. fulvus |
| pilV | DEFDS\_0860 |  |  |  | NA |
| pilW | DEFDS\_0859 |  | NA |  | NA |
| pilX | DEFDS\_0858 |  |  |  | NA |
| pilY1 | DEFDS\_0862 |  | NA |  |  |
| pilB | DEFDS\_1109 | 43/64 | 46/64 | 44/67 | 58/77 |
| pilT | DEFDS\_1110 | 51/68 |  | 52/68 | 52/69 |
| pilC | DEFDS\_1111 |  | 31/52 | 41/61 | 46/64 |
| pilS | DEFDS\_1112 |  |  | 24/48 | 23/46 |
| pilR | DEFDS\_1092 |  |  | 42/64 | 42/61 |
| pilQ | DEFDS\_1724 | 29/54 |  |  |  |
| pilP | DEFDS\_1725 |  |  |  | 26/42 |
| pilO | DEFDS\_1726 |  |  |  |  |
| pilN | DEFDS\_1727 | 24/45 |  |  |  |
| pilM | DEFDS\_1728 | 25/46 |  |  | 32/55 |
| pilD | DEFDS\_0112 | 33/52 | 31/53 | 36/57 | 39/58 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| *Desulfobacula toluolica* | Locus ID | % iden/sim  N. gonorrhoeae | % iden/sim  E. coli | % iden/sim  P. aeruginosa | % iden/sim  M. fulvus |
| pilV | TOL2\_21580 |  |  |  | NA |
| pilW | TOL2\_21570 |  | NA |  | NA |
| pilX | TOL2\_21590 |  |  |  | NA |
| pilY1 | TOL2\_21600 |  | NA |  |  |
| pilB | TOL2\_24450 | 39/61 | 42/60 | 40/60 | 44/63 |
| pilT | TOL2\_17060 | 46/64 |  | 39/58 | 47/68 |
| pilC | TOL2\_20070 |  | 29/50 | 40/62 | 56/71 |
| pilS | TOL2\_20060 |  |  |  | 35/57 |
| pilR | TOL2\_16940 |  |  | 37/61 | 37/57 |
| pilQ | TOL2\_05880 | 31/51 |  |  | 31/52 |
| pilP | TOL2\_05870 |  |  |  | 29/48 |
| pilO | TOL2\_05860 | 30/49 |  |  | 28/51 |
| pilN | TOL2\_05850 | 24/42 |  |  | 28/48 |
| pilM | TOL2\_05840 | 23/43 |  |  | 39/57 |
| pilD | TOL2\_13660 | 35/51 | 30/50 | 33/50 | 35/56 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| *Desulfobacula phenolica* | Locus ID | % iden/sim  N. gonorrhoeae | % iden/sim  E. coli | % iden/sim  P. aeruginosa | % iden/sim  M. fulvus |
| pilV | Ga0066824\_103426 |  |  |  | NA |
| pilW | Ga0066824\_103427 |  | NA |  | NA |
| pilX | Ga0066824\_103425 |  |  |  | NA |
| pilY1 | Ga0066824\_103424 |  | NA |  |  |
| pilB | Ga0066824\_103136 | 39/61 | 42/61 | 43/63 | 44/64 |
| pilT | Ga0066824\_102282 | 39/58 | 0 | 40/59 | 41/61 |
| pilC | Ga0066824\_11913 |  | 29/50 | 39/62 | 56/70 |
| pilS | Ga0066824\_102268 |  |  |  |  |
| pilR | Ga0066824\_102269 |  |  | 39/58 | 43/62 |
| pilQ | Ga0066824\_102263 |  |  |  | 30/52 |
| pilP | Ga0066824\_102264 |  |  |  | 29/48 |
| pilO | Ga0066824\_102265 | 30/49 |  |  | 28/51 |
| pilN | Ga0066824\_102266 | 24/42 |  |  | 28/48 |
| pilM | Ga0066824\_102267 | 24/44 |  |  | 39/57 |
| pilD | Ga0066824\_101299 | 34/50 | 29/50 | 34/50 | 33/56 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| *Geobacter uraniireducens* | Locus ID | % iden/sim  N. gonorrhoeae | % iden/sim  E. coli | % iden/sim  P. aeruginosa | % iden/sim  M. fulvus |
| pilV | Gura\_1806 |  |  |  | NA |
| pilW | Gura\_1807 |  | NA | 27/39 | NA |
| pilX | Gura\_1808 |  |  |  | NA |
| pilY1 | Gura\_1804 |  | NA | 23/34 |  |
| pilB | Gura\_2682 | 43/64 | 44/64 | 45/64 | 65/83 |
| pilT | Gura\_2681 | 46/66 |  | 51/68 | 50/68 |
| pilC | Gura\_2680 |  | 29/50 | 41/63 | 60/75 |
| pilS | Gura\_1801 |  |  |  |  |
| pilR | Gura\_1802 |  |  | 40/60 | 42/62 |
| pilQ | Gura\_1814 | 34/51 |  |  | 34/50 |
| pilP | Gura\_1813 |  |  |  | 25/48 |
| pilO | Gura\_1812 | 27/52 |  |  | 33/55 |
| pilN | Gura\_1811 | 28/41 |  |  |  |
| pilM | Gura\_1810 | 25/45 |  |  | 49/70 |
| pilD | Gura\_1800 | 38/57 | 33/54 | 40/59 | 37/63 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Geobacter lovleyi | Locus ID | % iden/sim  N. gonorrhoeae | % iden/sim  E. coli | % iden/sim  P. aeruginosa | % iden/sim  M. fulvus |
| pilV | Glov\_2153 |  |  |  | NA |
| pilW | Glov\_2152 |  | NA |  | NA |
| pilX | Glov\_2151 |  |  | 19/36 | NA |
| pilY1 | Glov\_2155 |  | NA | 22/33 |  |
| pilB | Glov\_1653 | 43/63 | 38/58 | 46/65 | 64/82 |
| pilT | Glov\_1654 | 48/66 |  | 52/69 | 48/68 |
| pilC | Glov\_1655 |  | 29/49 | 40/61 | 60/75 |
| pilS | Glov\_1656 |  |  | 27/43 | 34/52 |
| pilR | Glov\_1657 |  |  | 43/64 | 48/66 |
| pilQ | Glov\_1644 | 30/47 |  |  | 32/51 |
| pilP | Glov\_1643 |  |  |  |  |
| pilO | Glov\_1642 | 22/47 |  |  | 35/56 |
| pilN | Glov\_1641 |  |  |  |  |
| pilM | Glov\_1640 | 26/48 |  |  | 48/69 |
| pilD | Glov\_2160 | 40/53 | 32/52 | 38/53 | 41/60 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Geobacter bemidjiensis | Locus ID | % iden/sim  N. gonorrhoeae | % iden/sim  E. coli | % iden/sim  P. aeruginosa | % iden/sim  M. fulvus |
| pilV | Gbem\_1542 |  |  |  | NA |
| pilW | Gbem\_1539 |  | NA |  | NA |
| pilX | Gbem\_1540 |  |  |  | NA |
| pilY1 | Gbem\_1536 |  | NA |  |  |
| pilB | Gbem\_2595 | 44/64 | 45/64 | 46/66 | 64/82 |
| pilT | Gbem\_2594 | 46/66 |  | 51/68 | 49/68 |
| pilC | Gbem\_2593 |  | 29/51 | 39/64 | 58/75 |
| pilS | Gbem\_2592 |  |  | 31/47 | 35/54 |
| pilR | Gbem\_2591 |  |  | 43/61 | 47/64 |
| pilQ | Gbem\_1550 | 33/51 |  |  | 36/52 |
| pilP | Gbem\_1549 |  |  |  |  |
| pilO | Gbem\_1548 | 30/51 |  |  | 34/55 |
| pilN | Gbem\_1547 | 25/43 |  |  | 37/60 |
| pilM | Gbem\_1546 | 28/47 |  |  | 51/68 |
| pilD | Gbem\_1532 | 35/51 | 31/49 | 33/52 | 37/59 |

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| Geobacter daltonii | Locus ID | % iden/sim  N. gonorrhoeae | % iden/sim  E. coli | % iden/sim  P. aeruginosa | % iden/sim  M. fulvus |
| pilV | Geob\_3075 |  |  |  | NA |
| pilW | Geob\_3074 |  | NA |  | NA |
| pilX | Geob\_3073 |  |  |  | NA |
| pilY1 | Geob\_3077 |  | NA |  |  |
| pilB | Geob\_3374 | 43/65 | 38/58 | 46/65 | 65/83 |
| pilT | Geob\_3373 | 46/66 |  | 53/69 | 48/68 |
| pilC | Geob\_3372 |  | 29/51 | 40/64 | 59/75 |
| pilS | Geob\_3371 |  |  | 26/43 | 34/52 |
| pilR | Geob\_3370 |  |  | 43/61 | 49/67 |
| pilQ | Geob\_3066 | 33/50 |  |  | 32/51 |
| pilP | Geob\_3067 | 26/39 |  |  | 29/49 |
| pilO | Geob\_3068 |  |  |  | 33/56 |
| pilN | Geob\_3069 | 26/47 |  |  | 35/61 |
| pilM | Geob\_3070 | 25/46 |  |  | 51/70 |
| pilD | Geob\_3081 | 35/57 | 33/55 | 38/59 | 40/63 |

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| Geobacter sp. M21 | Locus ID | % iden/sim  N. gonorrhoeae | % iden/sim  E. coli | % iden/sim  P. aeruginosa | % iden/sim  M. fulvus |
| pilV | GM21\_2673 |  |  |  | NA |
| pilW | GM21\_2672 |  | NA |  | NA |
| pilX | GM21\_2671 |  |  |  | NA |
| pilY1 | GM21\_2679 |  | NA |  |  |
| pilB | GM21\_1631 | 43/63 | 45/64 | 46/65 | 64/82 |
| pilT | GM21\_1632 | 46/66 | 0 | 51/68 | 49/68 |
| pilC | GM21\_1633 |  | 29/51 | 39/64 | 59/75 |
| pilS | GM21\_1634 |  |  | 28/45 | 33/51 |
| pilR | GM21\_1635 |  |  | 42/61 | 47/65 |
| pilQ | GM21\_2665 | 33/51 |  |  | 33/49 |
| pilP | GM21\_2666 |  |  |  |  |
| pilO | GM21\_2667 | 28/50 |  |  | 33/55 |
| pilN | GM21\_2668 | 27/45 |  |  | 35/58 |
| pilM | GM21\_2669 | 28/48 |  |  | 51/69 |
| pilD | GM21\_2684 | 36/52 | 32/50 | 34/52 | 37/58 |

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| Geobacter sp. M18 | Locus ID | % iden/sim  N. gonorrhoeae | % iden/sim  E. coli | % iden/sim  P. aeruginosa | % iden/sim  M. fulvus |
| pilV | GM18\_1373 |  |  |  | NA |
| pilW | GM18\_1374 |  | NA |  | NA |
| pilX | GM18\_1375 |  |  |  | NA |
| pilY1 | GM18\_1371 |  | NA |  |  |
| pilB | GM18\_2497 | 43/63 | 45/64 | 46/66 | 64/82 |
| pilT | GM18\_2496 | 46/67 |  | 51/68 | 49/68 |
| pilC | GM18\_2495 |  | 29/50 | 39/63 | 60/75 |
| pilS | GM18\_2494 |  |  | 28/45 | 34/53 |
| pilR | GM18\_2493 |  |  | 43/61 | 47/64 |
| pilQ | GM18\_1385 | 33/51 |  |  | 34/50 |
| pilP | GM18\_1384 |  |  |  |  |
| pilO | GM18\_1383 | 30/50 |  |  | 31/51 |
| pilN | GM18\_1382 | 23/45 |  |  | 38/63 |
| pilM | GM18\_1381 | 26/46 |  |  | 50/71 |
| pilD | GM18\_1367 | 36/54 | 33/51 | 38/56 | 39/63 |

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| Geobacter bremensis | Locus ID | % iden/sim  N. gonorrhoeae | % iden/sim  E. coli | % iden/sim  P. aeruginosa | % iden/sim  M. fulvus |
| pilV | K419DRAFT\_00175 |  |  |  | NA |
| pilW | K419DRAFT\_00174 |  | NA |  | NA |
| pilX | K419DRAFT\_00173 |  |  | 26/53 | NA |
| pilY1 | K419DRAFT\_00177 |  | NA |  |  |
| pilB | K419DRAFT\_00806 | 43/63 | 45/64 | 46/66 | 64/82 |
| pilT | K419DRAFT\_00805 | 46/66 | 0 | 51/68 | 49/68 |
| pilC | K419DRAFT\_00804 |  | 27/51 | 40/64 | 59/75 |
| pilS | K419DRAFT\_00803 |  |  | 28/46 | 32/50 |
| pilR | K419DRAFT\_00802 |  |  | 42/61 | 47/64 |
| pilQ | K419DRAFT\_00163 | 32/51 |  |  | 36/52 |
| pilP | K419DRAFT\_00164 |  |  |  |  |
| pilO | K419DRAFT\_00165 |  |  | 28/49 | 33/54 |
| pilN | K419DRAFT\_00166 | 25/43 |  |  | 37/58 |
| pilM | K419DRAFT\_00167 | 28/48 |  |  | 51/69 |
| pilD | K419DRAFT\_00181 | 36/53 | 32/50 | 34/52 | 38/59 |

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| Desulfuromonas sp. TF | Locus ID | % iden/sim  N. gonorrhoeae | % iden/sim  E. coli | % iden/sim  P. aeruginosa | % iden/sim  M. fulvus |
| pilV | DTFDRAFT\_03646 |  |  |  | NA |
| pilW | DTFDRAFT\_03645 |  | NA |  | NA |
| pilX | DTFDRAFT\_03644 | 23/33 |  |  | NA |
| pilY1 | DTFDRAFT\_03643 |  | NA | 25/38 |  |
| pilB | DTFDRAFT\_03635 | 41/63 | 43/62 | 46/66 | 65/83 |
| pilT | DTFDRAFT\_03634 | 46/63 |  | 53/69 | 49/67 |
| pilC | DTFDRAFT\_03633 |  | 30/52 | 43/65 | 62/77 |
| pilS | DTFDRAFT\_03632 |  |  | 28/46 | 34/55 |
| pilR | DTFDRAFT\_03631 |  |  | 44/64 | 49/66 |
| pilQ | DTFDRAFT\_03588 | 38/54 |  |  | 31/47 |
| pilP | DTFDRAFT\_03589 | 22/45 |  |  | 33/48 |
| pilO | DTFDRAFT\_03590 | 24/45 |  |  | 30/56 |
| pilN | DTFDRAFT\_03591 | 23/45 |  |  | 30/56 |
| pilM | DTFDRAFT\_03592 | 24/42 |  |  | 51/71 |
| pilD | DTFDRAFT\_03594 | 39/57 | 32/50 | 38/57 | 41/65 |

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| Pelobacter seleniigenes |  | % identity/sim to Neisseria gonnorhoae | % identity/sim toEscherichia coli | % identity/sim to Pseudomonas aeruginosa | % identity/sim to Myxococcus fulvus |
| pilV | N909DRAFT\_0017 |  |  |  | NA |
| pilW | N909DRAFT\_0018 |  | NA |  | NA |
| pilX | N909DRAFT\_0016 |  |  | 22/38 | NA |
| pilY1 | N909DRAFT\_0014 |  | NA |  |  |
| pilB | N909DRAFT\_0011 | 42/65 | 44/64 | 46/65 | 66/83 |
| pilT | N909DRAFT\_0010 | 47/65 |  | 51/67 | 47/66 |
| pilC | N909DRAFT\_0009 |  | 30/51 | 43/65 | 58/74 |
| pilS | N909DRAFT\_0008 |  |  | 28/46 | 33/51 |
| pilR | N909DRAFT\_0007 |  |  | 44/65 | 46/65 |
| pilQ | N909DRAFT\_4152 | 39/55 |  |  | 33/49 |
| pilP | N909DRAFT\_4151 | 24/42 |  |  | 29/46 |
| pilO | N909DRAFT\_4150 | 26/49 |  |  | 30/53 |
| pilN | N909DRAFT\_4149 | 28/45 |  |  | 34/56 |
| pilM | N909DRAFT\_4148 | 22/43 |  |  | 46/69 |
| pilD | N909DRAFT\_4146 | 38/54 | 36/55 | 37/54 | 41/63 |

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| Geobacter argillaceus | Locus ID | % iden/sim  N. gonorrhoeae | % iden/sim  E. coli | % iden/sim  P. aeruginosa | % iden/sim  M. fulvus |
| pilV | Ga0052872\_00762 |  |  |  | NA |
| pilW | Ga0052872\_00761 |  | NA |  | NA |
| no pilX |  |  |  |  |  |
| pilY1 | Ga0052872\_00764 |  | NA |  |  |
| pilB | Ga0052872\_02389 | 43/63 | 39/58 | 45/64 | 65/81 |
| pilT | Ga0052872\_02388 | 47/66 |  | 51/68 | 48/68 |
| pilC | Ga0052872\_02387 |  | 29/51 | 39/63 | 60/73 |
| pilS | Ga0052872\_02386 |  |  | 28/45 | 39/55 |
| pilR | Ga0052872\_02385 |  |  | 45/61 | 50/66 |
| pilQ | Ga0052872\_00754 | 35/53 |  |  | 35/54 |
| pilP | Ga0052872\_00755 |  |  |  | 27/48 |
| pilO | Ga0052872\_00756 | 26/50 |  |  | 33/54 |
| pilN | Ga0052872\_00757 | 27/44 |  |  | 38/58 |
| pilM | Ga0052872\_00758 | 25/43 |  |  | 51/70 |
| pilD | Ga0052872\_00767 | 37/55 | 34/53 | 39/56 | 41/59 |

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| Desulfuromusa kysingii | Locus ID | % iden/sim  N. gonorrhoeae | % iden/sim  E. coli | % iden/sim  P. aeruginosa | % iden/sim  M. fulvus |
| pilV | Ga0056096\_03279 | 21/43 |  | 29/51 | NA |
| pilW | Ga0056096\_03278 | 22/37 | NA |  | NA |
| pilX | Ga0056096\_03277 |  |  |  | NA |
| pilY1 | Ga0056096\_03275 |  | NA | 31/46 |  |
| pilB | Ga0056096\_03270 | 42/64 | 43/64 | 46/65 | 65/82 |
| pilT | Ga0056096\_03269 | 46/65 |  | 50/67 | 47/66 |
| pilC | Ga0056096\_03268 |  | 30/51 | 43/64 | 58/73 |
| pilS | Ga0056096\_03267 |  |  | 27/45 | 36/54 |
| pilR | Ga0056096\_03266 |  |  | 42/61 | 46/66 |
| pilQ | Ga0056096\_02727 | 32/48 |  |  | 33/49 |
| pilP | Ga0056096\_02726 |  |  |  | 29/48 |
| pilO | Ga0056096\_02725 | 23/47 |  |  | 35/55 |
| pilN | Ga0056096\_02724 | 28/47 |  |  | 32/57 |
| pilM | Ga0056096\_02723 | 22/43 |  |  | 47/68 |
| pilD | Ga0056096\_02721 | 40/57 | 33/52 | 39/58 | 42/65 |

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| Desulfuromonas thiophila | Locus ID | % iden/sim  N. gonorrhoeae | % iden/sim  E. coli | % iden/sim  P. aeruginosa | % iden/sim  M. fulvus |
| pilV | Ga0056074\_11723 |  |  |  | NA |
| pilW | Ga0056074\_11722 |  | NA |  | NA |
| pilX | Ga0056074\_11724 | 22/39 |  |  | NA |
| pilY1 | Ga0056074\_11725 |  | NA | 32/46 |  |
| pilB | Ga0056074\_104200 | 42/65 | 45/63 | 45/65 | 61/81 |
| pilT | Ga0056074\_104199 | 48/66 |  | 53/68 | 50/69 |
| pilC | Ga0056074\_104198 |  | 29/51 | 43/65 | 60/76 |
| pilS | Ga0056074\_104197 |  |  | 31/51 | 36/53 |
| pilR | Ga0056074\_104196 |  |  | 47/64 | 47/63 |
| pilQ | Ga0056074\_104188 | 31/48 |  |  | 33/47 |
| pilP | Ga0056074\_104189 |  |  |  | 29/44 |
| pilO | Ga0056074\_104190 | 23/48 |  |  | 34/59 |
| pilN | Ga0056074\_104191 | 23/47 |  |  | 31/61 |
| pilM | Ga0056074\_104192 | 22/45 |  |  | 43/66 |
| pilD | Ga0056074\_104193 | 35/56 | 34/56 | 40/58 | 41/63 |

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| Geobacter pickeringii | Locus ID | % iden/sim  N. gonorrhoeae | % iden/sim  E. coli | % iden/sim  P. aeruginosa | % iden/sim  M. fulvus |
| pilV | Ga0069007\_111121 |  |  |  | NA |
| pilW | Ga0069007\_111122 | 39/62 | NA |  | NA |
| pilX | Ga0069007\_111123 |  |  |  | NA |
| pilY1 | Ga0069007\_111124 |  | NA |  |  |
| pilB | Ga0069007\_111767 | 43/64 | 45/66 | 45/66 | 65/81 |
| pilT | Ga0069007\_111766 | 49/67 |  | 51/68 | 50/69 |
| pilC | Ga0069007\_111765 |  | 29/50 | 40/64 | 60/76 |
| pilS | Ga0069007\_111764 |  |  | 27/46 | 37/54 |
| pilR | Ga0069007\_111763 |  |  | 44/61 | 47/66 |
| pilQ | Ga0069007\_111133 | 34/51 |  |  | 34/51 |
| pilP | Ga0069007\_111132 | 23/39 |  |  |  |
| pilO | Ga0069007\_111131 | 25/49 |  |  | 31/56 |
| pilN | Ga0069007\_111130 | 22/46 |  |  | 36/58 |
| pilM | Ga0069007\_111129 | 26/46 |  |  | 54/74 |
| pilD | Ga0069007\_111117 | 37/55 | 34/52 | 42/56 | 41/61 |

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| Geoalkalibacter ferrihydriticus | Locus ID | % iden/sim  N. gonorrhoeae | % iden/sim  E. coli | % iden/sim  P. aeruginosa | % iden/sim  M. fulvus |
| pilV | Ga0056053\_00642 |  |  |  | NA |
| pilW | Ga0056053\_00643 |  | NA |  | NA |
| pilX | Ga0056053\_00644 |  |  |  | NA |
| pilY1 | Ga0056053\_00645 |  | NA |  |  |
| pilB | Ga0056053\_00652 | 42/64 | 43/62 | 44/64 | 64/82 |
| pilT | Ga0056053\_00653 | 48/65 |  | 54/68 | 49/68 |
| pilC | Ga0056053\_00654 |  | 30/50 | 42/64 | 62/76 |
| pilS | Ga0056053\_00655 |  |  | 27/46 | 36/54 |
| pilR | Ga0056053\_00656 |  |  | 44/64 | 48/64 |
| pilQ | Ga0056053\_00669 | 37/54 |  |  | 36/52 |
| pilP | Ga0056053\_00668 | 25/40 |  |  | 38/51 |
| pilO | Ga0056053\_00667 | 25/47 |  |  | 34/56 |
| pilN | Ga0056053\_00666 | 23/45 |  |  | 36/63 |
| pilM | Ga0056053\_00665 | 22/43 |  |  | 50/70 |
| pilD | Ga0056053\_00664 | 41/56 | 33/52 | 37/55 | 42/63 |

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| Geopsychrobacter electrodiphilus | Locus ID | % iden/sim  N. gonorrhoeae | % iden/sim  E. coli | % iden/sim  P. aeruginosa | % iden/sim  M. fulvus |
| pilV | D888DRAFT\_0269 |  |  |  | NA |
| pilW | D888DRAFT\_0270 |  | NA |  | NA |
| pilX | D888DRAFT\_0271 |  |  |  | NA |
| pilY1 | D888DRAFT\_0272 |  | NA |  |  |
| pilB | D888DRAFT\_2047 | 41/63 | 43/64 | 43/65 | 67/84 |
| pilT | D888DRAFT\_2046 | 49/66 |  | 50/67 | 47/66 |
| pilC | D888DRAFT\_2045 |  | 29/49 | 42/64 | 58/74 |
| pilS | D888DRAFT\_2044 |  |  | 27/48 | 33/52 |
| pilR | D888DRAFT\_2043 |  |  | 44/63 | 48/65 |
| pilQ | D888DRAFT\_2018 | 36/51 |  |  | 33/48 |
| pilP | D888DRAFT\_2019 |  |  |  | 31/50 |
| pilO | D888DRAFT\_2020 | 26/50 |  |  | 32/56 |
| pilN | D888DRAFT\_2021 | 29/47 |  |  | 34/56 |
| pilM | D888DRAFT\_2022 | 23/43 |  |  | 46/67 |
| pilD | D888DRAFT\_2024 | 40/53 | 34/53 | 37/56 | 41/62 |