

Supplementary Table 1

Microarray results of putative bacteriophage-region ORFs. Start and end basepair numberings refer to those of strain Hildenborough. Those ORFs with DePue/Hilenborough signal ratios greater than 0.90 are highlighted in bold. Those ORFs with a ratio great than 0.5 are considered present in strain DePue.

| Location | ORF ID | NCBI ID | BP (Start) | BP (End) | Length (bp) | Strand | Functional Annotation (TIGR) | DePue/DvH |
|-----------|-----------------|----------------|----------------|----------------|-------------|----------|--|-------------|
| R1 | ORF04958 | DVU0189 | 233,752 | 235,437 | 1,685 | + | phage/plasmid primase, P4 family | 0.13 |
| R1 | ORF04960 | DVU0190 | 235,434 | 235,646 | 212 | - | hypothetical protein | 0.11 |
| R1 | ORF04961 | DVU0191 | 235,704 | 237,263 | 1,559 | + | conserved hypothetical protein | 0.06 |
| R1 | ORF04963 | DVU0192 | 237,390 | 238,748 | 1,358 | + | adenine specific DNA methyltransferase, putative | 0.05 |
| R1 | ORF04964 | DVU0193 | 238,741 | 239,472 | 731 | + | hypothetical protein | 0.30 |
| R1 | ORF04966 | DVU0194 | 239,489 | 241,447 | 1,958 | + | terminase, large subunit, putative | 0.17 |
| R1 | ORF04967 | DVU0195 | 241,444 | 241,662 | 218 | + | hypothetical protein | 0.19 |
| R1 | ORF04968 | DVU0196 | 242,191 | 242,586 | 395 | + | hypothetical protein | 0.19 |
| R1 | ORF04969 | DVU0197 | 242,590 | 244,290 | 1,700 | + | phage portal protein, lambda family | 0.08 |
| R1 | ORF04971 | DVU0198 | 244,274 | 245,593 | 1,319 | + | minor capsid protein C | 0.10 |
| R1 | ORF04973 | DVU0199 | 245,603 | 245,986 | 383 | + | conserved hypothetical protein | 0.09 |
| R1 | ORF04974 | DVU0200 | 245,998 | 247,002 | 1,004 | + | major head protein | 0.11 |
| R1 | ORF04975 | DVU0201 | 247,011 | 247,331 | 320 | + | hypothetical protein | 0.26 |
| R1 | ORF04976 | DVU0202 | 247,334 | 247,822 | 488 | + | holin | 0.12 |
| R1 | ORF04977 | DVU0203 | 247,843 | 248,391 | 548 | + | conserved hypothetical protein | 0.24 |
| R1 | ORF04979 | DVU0204 | 248,409 | 248,819 | 410 | + | lipoprotein, putative | 0.04 |
| R1 | ORF04981 | DVU0205 | 248,812 | 248,979 | 167 | + | hypothetical protein | 0.14 |
| R1 | ORF04982 | DVU0206 | 248,982 | 249,575 | 593 | + | hypothetical protein | 0.06 |
| R1 | ORF04983 | DVU0207 | 249,572 | 249,898 | 326 | + | hypothetical protein | 0.19 |
| R1 | ORF04984 | DVU0208 | 249,895 | 250,452 | 557 | + | hypothetical protein | 0.15 |
| R1 | ORF04985 | DVU0209 | 250,436 | 250,627 | 191 | + | conserved hypothetical protein | 0.08 |
| R1 | ORF04987 | DVU0210 | 250,631 | 252,094 | 1,463 | + | tail sheath protein, putative | 0.11 |
| R1 | ORF04988 | DVU0211 | 252,144 | 252,509 | 365 | + | tail tube protein, putative | 0.11 |
| R1 | ORF04991 | DVU0212 | 252,509 | 252,769 | 260 | + | conserved hypothetical protein | 0.15 |
| R1 | ORF04994 | DVU0213 | 252,969 | 254,459 | 1,490 | + | conserved domain protein | 0.47 |
| R1 | ORF04996 | DVU0214 | 254,468 | 255,667 | 1,199 | + | tail/DNA circulation protein, putative | 0.13 |
| R1 | ORF04997 | DVU0215 | 255,790 | 256,923 | 1,133 | + | tail protein, putative | 0.25 |
| R1 | ORF04999 | DVU0216 | 256,925 | 257,563 | 638 | + | phage baseplate assembly protein V, putative | 0.20 |
| R1 | ORF05000 | DVU0217 | 257,565 | 258,041 | 476 | + | tail protein, putative | 0.09 |
| R1 | ORF05002 | DVU0218 | 258,050 | 259,111 | 1,061 | + | tail protein, putative | 0.13 |
| R1 | ORF05003 | DVU0219 | 259,120 | 259,746 | 626 | + | tail protein, putative | 0.06 |
| R1 | ORF05004 | DVU0220 | 259,739 | 260,755 | 1,016 | + | tail protein, putative | 0.69 |
| R1 | ORF05006 | DVU0221 | 260,765 | 261,208 | 443 | + | tail fiber protein, putative | 0.98 |
| R1 | ORF05008 | DVU0222 | 261,220 | 261,549 | 329 | + | tail fiber assembly protein, putative | 0.53 |
| R1 | ORF05010 | DVU0223 | 261,649 | 261,831 | 182 | + | conserved domain protein | 0.13 |
| R1 | ORF05011 | DVU0224 | 261,875 | 262,270 | 395 | + | conserved domain protein | 0.15 |

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|-----------|-----------------|----------------|------------------|------------------|--------------|---|---|-------------|
| R1 | ORF05012 | DVU0225 | 262,334 | 262,510 | 176 | + | hypothetical protein | 0.11 |
| R1 | ORF05014 | DVU0226 | 262,657 | 263,796 | 1,139 | - | hypothetical protein | 0.10 |
| R1 | ORF05016 | DVU0227 | 263,799 | 264,329 | 530 | - | conserved hypothetical protein | 0.12 |
| R1 | ORF05017 | DVU0228 | 264,667 | 264,765 | 98 | + | hypothetical protein | 0.22 |
| R1 | ORF05021 | DVU0230 | 265,802 | 266,266 | 464 | + | transcriptional regulator cII, putative | 0.13 |
| R1 | ORF05022 | DVU0231 | 266,347 | 266,571 | 224 | + | hypothetical protein | 0.14 |
| R1 | ORF05023 | DVU0232 | 266,564 | 266,812 | 248 | + | hypothetical protein | 0.35 |
| R1 | ORF05025 | DVU0233 | 266,937 | 267,239 | 302 | - | hypothetical protein | 0.14 |
| R1 | ORF05027 | DVU0234 | 267,982 | 268,305 | 323 | + | hypothetical protein | 0.34 |
| R1 | ORF05028 | DVU0235 | 268,308 | 268,871 | 563 | + | hypothetical protein | 0.32 |
| R1 | ORF05031 | DVU0236 | 269,283 | 270,425 | 1,142 | - | site-specific recombinase, phage integrase family | 0.41 |
| R2 | ORF00763 | DVU1098 | 1,204,238 | 1,204,981 | 743 | - | adenine specific DNA methyltransferase, putative | 0.20 |
| R2 | ORF00765 | DVU1099 | 1,205,411 | 1,205,857 | 446 | - | tail fiber assembly protein, putative | 0.38 |
| R2 | ORF00766 | DVU1101 | 1,207,390 | 1,208,046 | 656 | - | tail fiber protein, putative | 0.29 |
| R2 | ORF00774 | DVU1103 | 1,209,360 | 1,209,794 | 434 | - | baseplate assembly protein, putative | 0.15 |
| R2 | ORF00777 | DVU1104 | 1,209,791 | 1,210,522 | 731 | - | baseplate assembly protein, putative | 0.13 |
| R2 | ORF00778 | DVU1105 | 1,210,509 | 1,211,309 | 800 | - | hypothetical protein | 0.12 |
| R2 | ORF00779 | DVU1106 | 1,211,455 | 1,212,066 | 611 | - | hypothetical protein | 0.18 |
| R2 | ORF00781 | DVU1107 | 1,212,003 | 1,214,345 | 2,342 | - | tail tape measure protein, FRAMESHIFT | 0.15 |
| R2 | ORF00784 | DVU1108 | 1,214,546 | 1,214,878 | 332 | - | hypothetical protein | 0.13 |
| R2 | ORF00786 | DVU1109 | 1,215,111 | 1,216,133 | 1,022 | + | ATPase domain protein | 0.35 |
| R2 | ORF00788 | DVU1110 | 1,216,193 | 1,216,639 | 446 | - | hypothetical protein | 0.14 |
| R2 | ORF00790 | DVU1111 | 1,216,652 | 1,218,337 | 1,685 | - | hypothetical protein | 0.16 |
| R2 | ORF00794 | DVU1113 | 1,218,729 | 1,219,265 | 536 | - | hypothetical protein | 0.21 |
| R2 | ORF00795 | DVU1114 | 1,219,280 | 1,219,720 | 440 | - | virion morphogenesis protein | 0.23 |
| R2 | ORF00796 | DVU1115 | 1,219,720 | 1,220,151 | 431 | - | conserved hypothetical protein | 0.15 |
| R2 | ORF00797 | DVU1116 | 1,220,432 | 1,221,427 | 995 | - | hypothetical protein | 0.12 |
| R2 | ORF00798 | DVU1117 | 1,221,436 | 1,221,783 | 347 | - | hypothetical protein | 0.16 |
| R2 | ORF00800 | DVU1118 | 1,221,799 | 1,222,749 | 950 | - | conserved hypothetical protein | 0.17 |
| R2 | ORF00801 | DVU1119 | 1,222,939 | 1,224,240 | 1,301 | - | virion morphogenesis protein | 1.14 |
| R2 | ORF00802 | DVU1120 | 1,224,240 | 1,225,832 | 1,592 | - | conserved hypothetical protein | 0.09 |
| R2 | ORF00803 | DVU1121 | 1,225,917 | 1,226,537 | 620 | - | hypothetical protein | 0.26 |
| R2 | ORF00805 | DVU1122 | 1,226,597 | 1,228,081 | 1,484 | - | portal protein, putative | 0.33 |
| R2 | ORF00807 | DVU1123 | 1,228,132 | 1,228,701 | 569 | - | conserved domain protein | 0.10 |
| R2 | ORF00810 | DVU1125 | 1,228,979 | 1,229,452 | 473 | - | hypothetical protein | 0.12 |
| R2 | ORF00811 | DVU1124 | 1,228,740 | 1,228,982 | 242 | - | hypothetical protein | 0.46 |
| R2 | ORF00812 | DVU1126 | 1,229,449 | 1,229,754 | 305 | - | lipoprotein, putative | 0.24 |
| R2 | ORF00815 | DVU1128 | 1,230,114 | 1,230,779 | 665 | - | lysozyme, putative | 0.11 |
| R2 | ORF00816 | DVU1129 | 1,230,779 | 1,231,147 | 368 | - | conserved hypothetical protein | 0.10 |
| R2 | ORF00817 | DVU1130 | 1,231,221 | 1,231,685 | 464 | - | DNA-binding domain protein | 0.09 |
| R2 | ORF00818 | DVU1131 | 1,231,669 | 1,232,034 | 365 | - | hypothetical protein | 0.08 |

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|----|----------|---------|-----------|-----------|-------|---|--|------|
| R2 | ORF00819 | DVU1132 | 1,232,031 | 1,232,540 | 509 | - | conserved hypothetical protein | 0.18 |
| R2 | ORF00820 | DVU1133 | 1,232,504 | 1,232,962 | 458 | - | hypothetical protein | 0.25 |
| R2 | ORF00822 | DVU1134 | 1,233,044 | 1,233,331 | 287 | - | DNA-binding protein HU, beta subunit (hupB) | 0.14 |
| R2 | ORF00823 | DVU1135 | 1,233,345 | 1,233,584 | 239 | - | conserved hypothetical protein | 0.10 |
| R2 | ORF00824 | DVU1136 | 1,233,602 | 1,234,114 | 512 | - | host-nuclease inhibitor protein Gam, putative | 0.12 |
| R2 | ORF00826 | DVU1137 | 1,234,116 | 1,234,304 | 188 | - | hypothetical protein | 0.12 |
| R2 | ORF00827 | DVU1138 | 1,234,307 | 1,234,939 | 632 | - | hypothetical protein | 0.11 |
| R2 | ORF00829 | DVU1139 | 1,234,932 | 1,235,669 | 737 | - | bacteriophage DNA transposition B protein, putative | 0.09 |
| R2 | ORF00830 | DVU1140 | 1,235,666 | 1,237,819 | 2,153 | - | bacteriophage transposase A protein, putative | 0.11 |
| R2 | ORF00832 | DVU1141 | 1,238,043 | 1,238,474 | 431 | - | hypothetical protein | 0.08 |
| R2 | ORF00833 | DVU1142 | 1,238,531 | 1,238,800 | 269 | - | transcriptional regulator, putative | 0.14 |
| R2 | ORF00836 | DVU1143 | 1,238,797 | 1,239,222 | 425 | - | hypothetical protein | 0.11 |
| R2 | ORF00837 | DVU1144 | 1,239,484 | 1,240,251 | 767 | + | transcriptional regulator, Cro/CI family | 0.28 |
| R3 | ORF01376 | DVU1476 | 1,556,492 | 1,556,701 | 209 | - | hypothetical protein | 0.18 |
| R3 | ORF01386 | DVU1479 | 1,558,664 | 1,559,671 | 1,007 | + | conserved hypothetical protein | 0.21 |
| R3 | ORF01388 | DVU1480 | 1,559,712 | 1,560,071 | 359 | + | conserved domain protein | 0.19 |
| R3 | ORF01389 | DVU1481 | 1,560,130 | 1,560,939 | 809 | - | nuclease domain protein | 0.22 |
| R3 | ORF01392 | DVU1483 | 1,561,263 | 1,561,772 | 509 | - | tail fiber assembly protein, putative | 0.28 |
| R3 | ORF01393 | DVU1484 | 1,561,765 | 1,562,103 | 338 | - | hypothetical protein | 0.48 |
| R3 | ORF01398 | DVU1488 | 1,565,890 | 1,566,795 | 905 | - | minor tail protein, putative | 0.18 |
| R3 | ORF01399 | DVU1489 | 1,566,799 | 1,567,149 | 350 | - | hypothetical protein | 0.13 |
| R3 | ORF01401 | DVU1490 | 1,567,152 | 1,569,950 | 2,798 | - | tail tape measure protein, putative | 0.20 |
| R3 | ORF01402 | DVU1491 | 1,570,123 | 1,570,305 | 182 | + | conserved hypothetical protein | 0.17 |
| R3 | ORF01404 | | | | | - | hypothetical protein | 0.11 |
| R3 | ORF01406 | DVU1494 | 1,571,570 | 1,572,733 | 1,163 | - | hypothetical protein | 0.11 |
| R3 | ORF01410 | DVU1498 | 1,573,950 | 1,574,507 | 557 | - | conserved hypothetical protein | 0.11 |
| R3 | ORF01411 | DVU1499 | 1,574,511 | 1,574,780 | 269 | - | hypothetical protein | 0.20 |
| R3 | ORF01412 | DVU1500 | 1,574,826 | 1,576,022 | 1,196 | - | major capsid protein, HK97 family | 0.10 |
| R3 | ORF01415 | DVU1501 | 1,576,227 | 1,576,961 | 734 | - | ClpP protease family protein | 0.17 |
| R3 | ORF01416 | DVU1502 | 1,576,954 | 1,578,213 | 1,259 | - | portal protein, HK97 family | 0.16 |
| R3 | ORF01417 | DVU1503 | 1,578,213 | 1,579,910 | 1,697 | - | terminase, large subunit | 0.13 |
| R3 | ORF01420 | DVU1504 | 1,579,915 | 1,580,382 | 467 | - | terminase, small subunit | 0.09 |
| R3 | ORF01421 | DVU1505 | 1,580,466 | 1,580,864 | 398 | - | holin, putative | 0.10 |
| R3 | ORF01422 | DVU1506 | 1,580,884 | 1,581,132 | 248 | - | hypothetical protein | 0.21 |
| R3 | ORF01423 | DVU1507 | 1,581,129 | 1,581,479 | 350 | - | hypothetical protein | 0.20 |
| R3 | ORF01424 | DVU1508 | 1,581,479 | 1,581,886 | 407 | - | conserved hypothetical protein, FRAMESHIFT | 0.09 |
| R3 | ORF01426 | DVU1509 | 1,582,050 | 1,582,439 | 389 | - | conserved hypothetical protein | 0.12 |
| R3 | ORF01431 | DVU1512 | 1,583,337 | 1,583,597 | 260 | - | hypothetical protein | 0.15 |
| R3 | ORF01432 | DVU1513 | 1,583,584 | 1,584,078 | 494 | - | conserved domain protein | 0.21 |
| R3 | ORF01434 | DVU1514 | 1,584,247 | 1,585,464 | 1,217 | - | hypothetical protein | 0.16 |
| R3 | ORF01436 | DVU1515 | 1,585,461 | 1,586,924 | 1,463 | - | type II DNA modification methyltransferase, putative | 0.14 |

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|----|----------|---------|-----------|-----------|-------|---|--|------|
| R3 | ORF01437 | DVU1516 | 1,587,127 | 1,587,486 | 359 | - | hypothetical protein | 0.14 |
| R3 | ORF01438 | DVU1517 | 1,587,483 | 1,587,896 | 413 | - | transcriptional regulator cII, putative | 0.15 |
| R3 | ORF01439 | DVU1518 | 1,588,107 | 1,588,397 | 290 | - | transcriptional regulator cI, truncation | 0.37 |
| R3 | ORF01445 | DVU1520 | 1,589,165 | 1,590,151 | 986 | + | hypothetical protein | 0.31 |
| R3 | ORF01447 | DVU1521 | 1,590,141 | 1,590,320 | 179 | + | hypothetical protein | 0.37 |
| R3 | ORF01448 | DVU1522 | 1,590,750 | 1,591,145 | 395 | + | hypothetical protein | 0.25 |
| R3 | ORF01449 | DVU1523 | 1,591,191 | 1,592,219 | 1,028 | + | hypothetical protein | 0.38 |
| R3 | ORF01450 | DVU1524 | 1,592,222 | 1,593,118 | 896 | + | conserved hypothetical protein | 0.10 |
| R3 | ORF01452 | DVU1525 | 1,593,138 | 1,594,130 | 992 | + | conserved domain protein | 0.27 |
| R3 | ORF01454 | DVU1526 | 1,594,494 | 1,594,712 | 218 | - | site-specific recombinase, phage integrase family | 0.23 |
| R4 | ORF01747 | DVU1694 | 1,770,879 | 1,771,088 | 209 | - | C4-type zinc finger protein, DksA/TraR family | 0.09 |
| R4 | ORF01748 | DVU1695 | 1,771,104 | 1,771,613 | 509 | - | tail fiber assembly protein, putative | 0.49 |
| R4 | ORF01750 | DVU1696 | 1,771,606 | 1,771,974 | 368 | - | hypothetical protein | 0.10 |
| R4 | ORF01751 | DVU1697 | 1,771,977 | 1,772,555 | 578 | - | hypothetical protein | 0.59 |
| R4 | ORF01754 | DVU1698 | 1,773,086 | 1,773,571 | 485 | - | hypothetical protein | 0.11 |
| R4 | ORF01758 | DVU1699 | 1,773,938 | 1,774,057 | 119 | + | hypothetical protein | 0.19 |
| R4 | ORF01759 | DVU1700 | 1,774,325 | 1,775,572 | 1,247 | + | metallo-beta-lactamase superfamily domain protein | 0.31 |
| R4 | ORF01762 | DVU1701 | 1,775,767 | 1,776,084 | 317 | - | hypothetical protein | 0.21 |
| R4 | ORF01764 | DVU1702 | 1,776,998 | 1,777,741 | 743 | - | conserved hypothetical protein | 0.27 |
| R4 | ORF01766 | DVU1703 | 1,777,728 | 1,781,027 | 3,299 | - | type I restriction-modification enzyme, R subunit | 0.18 |
| R4 | ORF01769 | DVU1706 | 1,782,524 | 1,782,634 | 110 | - | hypothetical protein | 0.58 |
| R4 | ORF01770 | DVU1705 | 1,781,460 | 1,782,479 | 1,019 | - | type I restriction-modification enzyme, S subunit | 0.23 |
| R4 | ORF01772 | DVU1707 | 1,782,760 | 1,782,969 | 209 | - | hypothetical protein | 0.42 |
| R4 | ORF01773 | DVU1708 | 1,782,972 | 1,783,985 | 1,013 | - | conserved hypothetical protein | 0.15 |
| R4 | ORF01775 | DVU1709 | 1,783,998 | 1,785,508 | 1,510 | - | type I restriction-modification system, M subunit (hsdM) | 0.13 |
| R4 | ORF01777 | DVU1710 | 1,785,521 | 1,786,099 | 578 | - | conserved hypothetical protein | 0.52 |
| R4 | ORF01780 | DVU1711 | 1,786,512 | 1,786,649 | 137 | - | hypothetical protein | 0.48 |
| R4 | ORF01782 | DVU1712 | 1,786,746 | 1,788,347 | 1,601 | - | hypothetical protein | 0.28 |
| R4 | ORF01783 | DVU1713 | 1,788,317 | 1,788,952 | 635 | - | hypothetical protein | 0.12 |
| R4 | ORF01785 | DVU1714 | 1,788,961 | 1,791,054 | 2,093 | - | conserved hypothetical protein | 0.29 |
| R4 | ORF01786 | DVU1715 | 1,791,227 | 1,791,814 | 587 | - | hypothetical protein | 0.29 |
| R4 | ORF01788 | DVU1716 | 1,791,856 | 1,792,200 | 344 | - | hypothetical protein | 0.19 |
| R4 | ORF01789 | DVU1717 | 1,792,212 | 1,792,613 | 401 | - | hypothetical protein | 0.10 |
| R4 | ORF01790 | DVU1718 | 1,792,670 | 1,793,602 | 932 | - | hypothetical protein | 0.10 |
| R4 | ORF01792 | DVU1719 | 1,793,607 | 1,794,446 | 839 | - | conserved hypothetical protein | 0.24 |
| R4 | ORF01793 | DVU1720 | 1,794,443 | 1,794,775 | 332 | - | hypothetical protein | 0.08 |
| R4 | ORF01797 | DVU1721 | 1,794,775 | 1,796,427 | 1,652 | - | hypothetical protein | 0.13 |
| R4 | ORF01798 | DVU1722 | 1,796,428 | 1,796,781 | 353 | - | hypothetical protein | 0.38 |
| R4 | ORF01799 | DVU1723 | 1,796,778 | 1,797,332 | 554 | - | hypothetical protein | 0.12 |
| R4 | ORF01800 | DVU1724 | 1,797,329 | 1,798,933 | 1,604 | - | phage uncharacterized protein, putative | 0.15 |
| R4 | ORF01801 | DVU1725 | 1,798,920 | 1,799,528 | 608 | - | conserved hypothetical protein | 0.21 |

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|-----------|-----------------|----------------|------------------|------------------|--------------|----------|--|-------------|
| R4 | ORF01802 | DVU1727 | 1,799,909 | 1,800,259 | 350 | - | hypothetical protein | 0.45 |
| R4 | ORF01803 | DVU1726 | 1,799,664 | 1,799,912 | 248 | - | hypothetical protein | 0.15 |
| R4 | ORF01804 | DVU1728 | 1,800,259 | 1,800,675 | 416 | - | conserved hypothetical protein | 0.15 |
| R4 | ORF01805 | DVU1729 | 1,800,946 | 1,801,224 | 278 | + | killer protein, putative | 0.81 |
| R4 | ORF01806 | DVU1730 | 1,801,234 | 1,801,539 | 305 | + | helix-turn-helix domain protein | 0.20 |
| R4 | ORF01808 | DVU1731 | 1,801,647 | 1,801,817 | 170 | - | hypothetical protein | 0.21 |
| R4 | ORF01809 | DVU1732 | 1,801,863 | 1,802,090 | 227 | - | hypothetical protein | 0.20 |
| R4 | ORF01810 | DVU1733 | 1,803,107 | 1,803,328 | 221 | - | hypothetical protein | 0.94 |
| R4 | ORF01812 | DVU1734 | 1,804,805 | 1,804,981 | 176 | - | hypothetical protein | 0.15 |
| R4 | ORF01814 | DVU1735 | 1,805,962 | 1,806,105 | 143 | + | hypothetical protein | 0.56 |
| R4 | ORF01815 | DVU1736 | 1,806,089 | 1,806,283 | 194 | + | hypothetical protein | 0.13 |
| R4 | ORF01816 | DVU1737 | 1,806,390 | 1,806,608 | 218 | - | conserved hypothetical protein | 0.28 |
| R4 | ORF01818 | DVU1738 | 1,806,786 | 1,807,430 | 644 | - | site-specific recombinase, phage integrase family | 0.16 |
| R4 | ORF01819 | DVU1739 | 1,808,056 | 1,808,148 | 92 | - | hypothetical protein | 0.42 |
| R4 | ORF01821 | DVU1740 | 1,808,578 | 1,808,979 | 401 | - | hypothetical protein | 0.17 |
| R4 | ORF01822 | DVU1741 | 1,808,976 | 1,809,947 | 971 | - | hypothetical protein | 0.19 |
| R4 | ORF01823 | DVU1742 | 1,810,417 | 1,810,656 | 239 | + | prevent-host-death family protein | 0.28 |
| R4 | ORF01824 | DVU1743 | 1,810,662 | 1,811,099 | 437 | - | hypothetical protein | 0.17 |
| R4 | ORF01825 | DVU1744 | 1,811,183 | 1,811,425 | 242 | - | helix-turn-helix domain protein | 0.11 |
| R4 | ORF01827 | DVU1745 | 1,811,492 | 1,812,031 | 539 | + | helix-turn-helix domain protein | 0.45 |
| R4 | ORF01830 | DVU1746 | 1,812,266 | 1,813,375 | 1,109 | + | C-5 cytosine-specific DNA methylase family protein | 0.17 |
| R4 | ORF01831 | DVU1747 | 1,813,416 | 1,816,361 | 2,945 | + | ATPase, histidine kinase-, DNA gyrase B- and HSP90-like do | 0.27 |
| R4 | ORF01834 | DVU1748 | 1,816,342 | 1,818,114 | 1,772 | + | hypothetical protein | 1.09 |
| R4 | ORF01837 | DVU1749 | 1,818,096 | 1,818,317 | 221 | - | hypothetical protein | 0.50 |
| R4 | ORF01838 | DVU1750 | 1,818,336 | 1,819,118 | 782 | + | hypothetical protein | 0.26 |
| R4 | ORF01840 | DVU1751 | 1,819,311 | 1,819,457 | 146 | + | hypothetical protein | 1.40 |
| R4 | ORF01843 | DVU1752 | 1,819,838 | 1,820,077 | 239 | + | hypothetical protein | 0.33 |
| R4 | ORF01844 | DVU1753 | 1,820,161 | 1,820,334 | 173 | + | hypothetical protein | 0.20 |
| R4 | ORF01845 | DVU1754 | 1,820,331 | 1,820,738 | 407 | + | hypothetical protein | 0.30 |
| R4 | ORF01846 | DVU1755 | 1,820,735 | 1,820,977 | 242 | + | hypothetical protein | 0.21 |
| R4 | ORF01848 | DVU1756 | 1,821,372 | 1,821,635 | 263 | + | hypothetical protein | 0.20 |
| R5 | ORF03437 | DVU2688 | 2,801,478 | 2,803,520 | 2,042 | + | bacteriophage transposase A protein | 0.15 |
| R5 | ORF03438 | DVU2689 | 2,803,529 | 2,804,314 | 785 | + | bacteriophage DNA transposon B protein | 0.29 |
| R5 | ORF03439 | DVU2690 | 2,804,317 | 2,804,904 | 587 | + | hypothetical protein | 0.14 |
| R5 | ORF03441 | DVU2691 | 2,805,178 | 2,805,711 | 533 | + | hypothetical protein | 0.39 |
| R5 | ORF03442 | DVU2692 | 2,805,721 | 2,805,957 | 236 | + | conserved domain protein | 0.11 |
| R5 | ORF03444 | DVU2693 | 2,806,043 | 2,806,282 | 239 | + | hypothetical protein | 0.42 |
| R5 | ORF03445 | DVU2694 | 2,806,364 | 2,806,798 | 434 | + | hypothetical protein | 0.20 |
| R5 | ORF03447 | DVU2695 | 2,806,807 | 2,807,223 | 416 | + | conserved hypothetical protein | 0.26 |
| R5 | ORF03448 | DVU2696 | 2,807,220 | 2,807,708 | 488 | + | conserved domain protein | 0.08 |
| R5 | ORF03449 | DVU2697 | 2,807,721 | 2,808,059 | 338 | + | hypothetical protein | 0.53 |

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|----|----------|---------|-----------|-----------|-------|---|---|------|
| R5 | ORF03450 | DVU2698 | 2,808,172 | 2,808,534 | 362 | + | lipoprotein, putative | 0.16 |
| R5 | ORF03451 | DVU2699 | 2,808,534 | 2,809,181 | 647 | + | transglycosylases SLT domain protein | 0.26 |
| R5 | ORF03452 | DVU2700 | 2,809,174 | 2,809,593 | 419 | + | hypothetical protein | 0.41 |
| R5 | ORF03453 | DVU2701 | 2,809,622 | 2,809,840 | 218 | + | hypothetical protein | 0.10 |
| R5 | ORF03454 | DVU2702 | 2,809,844 | 2,810,125 | 281 | + | conserved hypothetical protein | 0.19 |
| R5 | ORF03455 | DVU2703 | 2,810,112 | 2,810,327 | 215 | + | hypothetical protein | 0.20 |
| R5 | ORF03456 | DVU2704 | 2,810,329 | 2,810,847 | 518 | + | conserved hypothetical protein | 0.16 |
| R5 | ORF03457 | DVU2705 | 2,810,844 | 2,812,520 | 1,676 | + | phage uncharacterized protein | 0.36 |
| R5 | ORF03458 | DVU2706 | 2,812,507 | 2,814,225 | 1,718 | + | conserved hypothetical protein | 0.18 |
| R5 | ORF03460 | DVU2707 | 2,814,228 | 2,815,478 | 1,250 | + | virion morphogenesis protein | 0.29 |
| R5 | ORF03462 | DVU2708 | 2,815,643 | 2,816,131 | 488 | + | virion morphogenesis protein | 0.45 |
| R5 | ORF03463 | DVU2709 | 2,816,162 | 2,816,320 | 158 | + | hypothetical protein | 0.19 |
| R5 | ORF03466 | DVU2710 | 2,816,859 | 2,818,019 | 1,160 | + | conserved hypothetical protein | 0.16 |
| R5 | ORF03469 | DVU2711 | 2,818,020 | 2,818,949 | 929 | + | major head subunit, putative | 0.11 |
| R5 | ORF03470 | DVU2712 | 2,818,961 | 2,819,290 | 329 | + | virion morphogenesis protein | 0.35 |
| R5 | ORF03471 | DVU2713 | 2,819,290 | 2,819,721 | 431 | + | conserved hypothetical protein | 0.18 |
| R5 | ORF03473 | DVU2714 | 2,819,718 | 2,820,347 | 629 | + | conserved hypothetical protein | 0.16 |
| R5 | ORF03474 | DVU2715 | 2,820,350 | 2,820,535 | 185 | + | conserved hypothetical protein | 0.09 |
| R5 | ORF03475 | DVU2716 | 2,820,522 | 2,821,943 | 1,421 | + | tail sheath protein, putative | 0.19 |
| R5 | ORF03476 | DVU2717 | 2,822,022 | 2,822,849 | 827 | + | virion morphogenesis protein | |
| R5 | ORF03478 | DVU2718 | 2,822,842 | 2,822,994 | 152 | + | virion morphogenesis protein | 0.19 |
| R5 | ORF03480 | DVU2719 | 2,822,985 | 2,823,359 | 374 | + | conserved hypothetical protein | 0.37 |
| R5 | ORF03483 | DVU2720 | 2,823,557 | 2,823,886 | 329 | + | virion morphogenesis protein | 0.17 |
| R5 | ORF03486 | DVU2721 | 2,824,045 | 2,825,985 | 1,940 | + | phage tail tape measure protein, TP901 family, putative | 0.14 |
| R5 | ORF03488 | DVU2722 | 2,826,005 | 2,827,345 | 1,340 | + | conserved hypothetical protein | 0.18 |
| R5 | ORF03490 | DVU2723 | 2,827,365 | 2,828,489 | 1,124 | + | tail protein, putative | 0.21 |
| R5 | ORF03492 | DVU2724 | 2,828,486 | 2,829,112 | 626 | + | phage baseplate assembly protein V, putative | 0.32 |
| R5 | ORF03494 | DVU2725 | 2,829,051 | 2,829,401 | 350 | - | membrane protein, putative | 0.17 |
| R5 | ORF03496 | DVU2726 | 2,829,475 | 2,829,594 | 119 | + | virion morphogenesis protein | 0.20 |
| R5 | ORF03497 | DVU2727 | 2,829,573 | 2,829,929 | 356 | + | conserved hypothetical protein | 0.26 |
| R5 | ORF03499 | DVU2728 | 2,829,939 | 2,831,000 | 1,061 | + | tail protein, putative | 0.16 |
| R5 | ORF03501 | DVU2729 | 2,830,997 | 2,831,590 | 593 | + | tail protein, putative | 0.58 |
| R5 | ORF03503 | DVU2730 | 2,831,674 | 2,832,564 | 890 | + | tail fiber protein, putative | 0.27 |
| R5 | ORF03504 | DVU2731 | 2,832,574 | 2,833,113 | 539 | + | tail fiber assembly protein, putative | 0.32 |
| R5 | ORF03506 | DVU2732 | 2,833,414 | 2,833,614 | 200 | + | conserved hypothetical protein | 0.19 |
| R5 | ORF03507 | DVU2733 | 2,833,587 | 2,834,336 | 749 | + | adenine specific DNA methyltransferase, putative | 0.12 |
| R6 | ORF03668 | DVU2828 | 2,936,472 | 2,937,656 | 1,184 | + | site-specific recombinase, phage integrase family | 0.14 |
| R6 | ORF03670 | DVU2829 | 2,937,658 | 2,937,900 | 242 | - | hypothetical protein | 0.19 |
| R6 | ORF03671 | DVU2830 | 2,937,965 | 2,938,330 | 365 | - | hypothetical protein | 0.30 |
| R6 | ORF03674 | DVU2831 | 2,938,713 | 2,938,907 | 194 | - | hypothetical protein | 0.10 |
| R6 | ORF03675 | DVU2832 | 2,938,894 | 2,939,355 | 461 | - | transcriptional regulator cII, putative | 0.10 |

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|-----------|-----------------|----------------|------------------|------------------|------------|---|--|-------------|
| R6 | ORF03676 | DVU2833 | 2,939,513 | 2,939,842 | 329 | + | hypothetical protein | 0.20 |
| R6 | ORF03677 | DVU2834 | 2,939,832 | 2,940,170 | 338 | - | hypothetical protein | 0.27 |
| R6 | ORF03679 | DVU2835 | 2,940,240 | 2940512.00 | 272 | - | transcriptional regulator, putative | 0.17 |
| R6 | ORF03680 | DVU2836 | 2,940,609 | 2941055.00 | 446 | + | hypothetical protein | 0.22 |
| R6 | ORF03682 | DVU2837 | 2,941,168 | 2,942,241 | 1,073 | + | conserved hypothetical protein | 0.17 |
| R6 | ORF03685 | DVU2838 | 2,942,313 | 2,943,650 | 1,337 | + | conserved hypothetical protein | 0.31 |
| R6 | ORF03687 | DVU2839 | 2,943,651 | 2,944,175 | 524 | + | conserved hypothetical protein | 0.13 |
| R6 | ORF03689 | DVU2840 | 2,944,284 | 2,944,985 | 701 | - | conserved hypothetical protein | 0.27 |
| R6 | ORF03692 | DVU2841 | 2,944,985 | 2,946,184 | 1,199 | - | type II restriction endonuclease, putative | 0.26 |
| R6 | ORF03693 | DVU2842 | 2,946,324 | 2,947,400 | 1,076 | + | type II DNA modification methyltransferase, putative | 0.16 |
| R6 | ORF03694 | DVU2843 | 2,947,409 | 2,947,819 | 410 | + | DNA mismatch endonuclease Vsr, putative | 0.15 |
| R6 | ORF03695 | DVU2844 | 2,947,836 | 2,948,699 | 863 | + | hypothetical protein | 0.16 |
| R6 | ORF03697 | DVU2845 | 2,948,707 | 2,949,135 | 428 | + | HIT family protein | 0.14 |
| R6 | ORF03698 | DVU2846 | 2,949,141 | 2,949,314 | 173 | + | hypothetical protein | 0.19 |
| R6 | ORF03700 | DVU2847 | 2,949,441 | 2,949,770 | 329 | - | hypothetical protein | 0.91 |
| R6 | ORF03702 | DVU2848 | 2,949,782 | 2,950,321 | 539 | - | tail fiber assembly protein, putative | 0.26 |
| R6 | ORF03703 | DVU2849 | 2,950,331 | 2,951,146 | 815 | - | tail fiber protein, putative | 0.17 |
| R6 | ORF03704 | DVU2850 | 2,951,139 | 2,951,765 | 626 | - | tail protein, putative | 0.09 |
| R6 | ORF03706 | DVU2851 | 2,951,774 | 2,952,835 | 1,061 | - | tail protein, putative | 0.11 |
| R6 | ORF03708 | DVU2852 | 2,952,844 | 2,953,320 | 476 | - | tail protein, putative | 0.36 |
| R6 | ORF03709 | DVU2853 | 2,953,322 | 2,953,960 | 638 | - | phage baseplate assembly protein V, putative | 0.13 |
| R6 | ORF03711 | DVU2854 | 2,953,962 | 2,955,095 | 1,133 | - | tail protein, putative | 0.13 |
| R6 | ORF03712 | DVU2855 | 2,955,218 | 2,956,417 | 1,199 | - | tail/DNA circulation protein, putative | 0.27 |
| R6 | ORF03714 | DVU2856 | 2,956,426 | 2,957,916 | 1,490 | - | conserved domain protein | 0.29 |
| R6 | ORF03717 | DVU2857 | 2,958,116 | 2,958,376 | 260 | - | tail tube protein, putative | 0.08 |
| R6 | ORF03718 | DVU2858 | 2,958,376 | 2,958,741 | 365 | - | conserved hypothetical protein | 0.15 |
| R6 | ORF03720 | DVU2859 | 2,958,791 | 2,960,254 | 1,463 | - | tail sheath protein, putative | 0.10 |
| R6 | ORF03721 | DVU2860 | 2,960,258 | 2,960,449 | 191 | - | conserved hypothetical protein | 0.12 |
| R6 | ORF03723 | DVU2861 | 2,960,433 | 2,960,990 | 557 | - | hypothetical protein | 0.17 |
| R6 | ORF03724 | DVU2862 | 2,960,987 | 2,961,313 | 326 | - | hypothetical protein | 0.12 |
| R6 | ORF03725 | DVU2863 | 2,961,310 | 2,961,903 | 593 | - | hypothetical protein | 0.31 |
| R6 | ORF03726 | DVU2864 | 2,961,906 | 2,962,049 | 143 | - | hypothetical protein | 0.15 |
| R6 | ORF03727 | DVU2865 | 2,962,066 | 2,962,476 | 410 | - | lipoprotein, putative | 0.15 |
| R6 | ORF03730 | DVU2866 | 2,962,494 | 2,963,042 | 548 | - | conserved hypothetical protein | 0.37 |
| R6 | ORF03731 | DVU2867 | 2,963,063 | 2,963,551 | 488 | - | holin | 0.40 |
| R6 | ORF03732 | DVU2868 | 2,963,554 | 2,963,901 | 347 | - | hypothetical protein | 0.19 |
| R6 | ORF03733 | DVU2869 | 2,963,910 | 2,964,914 | 1,004 | - | major head protein | 0.09 |
| R6 | ORF03734 | DVU2870 | 2,964,926 | 2,965,309 | 383 | - | conserved hypothetical protein | 0.07 |
| R6 | ORF03736 | DVU2871 | 2,965,319 | 2,966,638 | 1,319 | - | minor capsid protein C | 0.36 |
| R6 | ORF03738 | DVU2872 | 2,966,622 | 2,968,322 | 1,700 | - | phage portal protein, lambda family | 0.19 |
| R6 | ORF03739 | DVU2873 | 2,968,326 | 2,968,601 | 275 | - | hypothetical protein | 0.11 |
| R6 | ORF03740 | DVU2874 | 2,968,828 | 2,969,256 | 428 | - | hypothetical protein | 0.25 |

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|----|----------|---------|-----------|-----------|-------|---|--|------|
| R6 | ORF03741 | DVU2875 | 2,969,249 | 2,969,467 | 218 | - | DNA binding domain, excisionase family | 0.30 |
| R6 | ORF03742 | DVU2876 | 2,969,464 | 2,971,350 | 1,886 | - | terminase, large subunit, putative | 0.23 |
| R6 | ORF03744 | DVU2877 | 2,971,442 | 2,972,164 | 722 | - | hypothetical protein | 0.26 |
| R6 | ORF03745 | DVU2878 | 2,972,157 | 2,973,515 | 1,358 | - | adenine specific DNA methyltransferase, putative | 0.12 |
| R6 | ORF03747 | DVU2879 | 2,973,642 | 2,975,198 | 1,556 | - | conserved hypothetical protein | 0.17 |
| R6 | ORF03748 | DVU2880 | 2,975,256 | 2,975,384 | 128 | + | hypothetical protein | 0.15 |
| R6 | ORF03750 | DVU2881 | 2,975,465 | 2,977,150 | 1,685 | - | phage/plasmid primase, P4 family | 0.14 |