

TableS1. Primer sequences for qRT-PCR validation of transcriptom data

| Gene ID | Annotated functions | Primer names | Primer sequences | Product sizes (bp) | log2.Fold_change |
|-----------|---|--------------|-----------------------|--------------------|------------------|
| B739_0094 | Outer membrane receptor for Fe ³⁺ + FecA | 0094P1 | TGGAACCTTTGGAATGTGTC | 130 | 2.65 |
| | | 0094P2 | AATCCACATCTGCAACTCTG | | |
| B739_0103 | TonB-linked outer membrane protein, SusC/RagA family | 0103P1 | TAATACCAGCCGTACATTGC | 153 | 3.359 |
| | | 0103P2 | TATTCAAGTTCCGTCTGCAC | | |
| B739_0173 | TonB-dependent receptor CirA, mostly Fe transport | 0173P1 | AGTACCTGCATCTACCTACG | 114 | 4.89 |
| | | 0173P2 | GCATCATCAGCGATACTTCC | | |
| B739_0975 | 30S ribosomal protein S17 | 0975P1 | GAATCGGAGTAGTTTTCGAGC | 153 | -3.98 |
| | | 0975P2 | CAGTATCGCCTTCGTTACAC | | |
| B739_1068 | FecA | 1068P1 | AGCTGGAACCTACGAACTAGG | 139 | 5.21 |
| | | 1068P2 | ATAAATCGCCTTGTCCTGTG | | |
| B739_1415 | Hypothetical protein | 1415P1 | ACATTGGAGACAAGATTGGC | 173 | 7.998 |
| | | 1415P2 | AGTGTATCCAGGTTCCAGAG | | |
| B739_1416 | FepA | 1416P1 | GCTAGTGATTACCCACAACC | 121 | 7.4 |
| | | 1416P2 | TAAATCCAAAGTTCCTGCCG | | |
| B739_1417 | HmuY | 1417P1 | ACCACAGAGTGGGATATAGG | 122 | 6.37 |
| | | 1417P2 | GGAGCTTCCTTTACATCTGC | | |
| B739_2092 | Starch binding outer membrane protein SusD | 2092P1 | AAGAGCACTGAGTTATGCAC | 194 | -1.51 |
| | | 2092P2 | TATCTGCTCTCCCGTATTCG | | |
| B739_0594 | Iron transporter FeoB | 0594P1 | TTGGTAACGCCGTTTATGAC | 123 | 1.1 |
| | | 0594P2 | CATACCCATAAGTGCCATCG | | |
| B739_0595 | Iron transporter FeoA | 0595P1 | GATAGCCAGCTAGAAATGCC | 163 | 1.5 |
| | | 0595P2 | GAATATAAGCCGCCTCTTCC | | |
| B739_0625 | RNA polymerase sigma factor | 0625P1 | CCATATTAGCGAACCTACGG | 172 | 0.11 |
| | | 0625P2 | GCTACAATCCGTATGCTCTG | | |
| B739_0071 | Outer membrane receptor proteins, mostly Fe transport | 0071P1 | AAGTGATTGCTCATCCTTCG | 142 | -1.73 |
| | | 0071P2 | CTCGGAAACTTACCCAATCC | | |
| B739_0876 | TonB-linked outer membrane protein, SusC/RagA family | 0876P1 | CATCAGCCTCTTTCAGTTGG | 188 | -1.21 |
| | | 0876P2 | GTCTGTGTTTGGAGCTACTG | | |
| B739_1045 | TonB-linked outer membrane protein, SusC/RagA family | 1045P1 | AACCACCAGTCCTAATTCAG | 141 | -1 |
| | | 1045P2 | CTGCCGAATACACTAGAACC | | |
| B739_1343 | Outer membrane receptor proteins, mostly Fe transport [Inorganic ion transport and metabolism];CirA | 1343P1 | TGGGAAACAGGTCTATCAGG | 165 | 0 |
| | | 1343P2 | CATATCGTACCGCAAAGCTG | | |
| B739_1968 | RNA polymerase sigma factor; | 1968P1 | TTACATCACTTCCGACATGC | 198 | -0.5 |
| | | 1968P2 | TCGCCCTCTTCTAAATTAGC | | |
| B739_0329 | Outer membrane receptor proteins, mostly Fe transport | 0329P1 | TCAGAACGCCTTAATGACTG | 118 | -0.3 |
| | | 0329P2 | TGATAAGCCCTGAAAGTACC | | |
| B739_0406 | Outer membrane receptor proteins, mostly Fe transport | 0406P1 | GCTAATGGAAACCTTTGGAC | 155 | -1.75 |
| | | 0406P2 | CCCTGACGAGTTACTTTCTG | | |
| B739_0782 | Hemolysin D | 0782P1 | ATGCCACAAGTCTATGAAGC | 152 | -1.35 |
| | | 0782P2 | CTAGCCGCATCTAGTTTAGC | | |

Table S2. The prediction of operons of *R. anatipestifer* CH-1 genes.

| Start | Stop | Strand | Number of Genes | Genes |
|--------|--------|--------|-----------------|---|
| 1105 | 2735 | - | 2 | B739_0001, B739_0002 |
| 4847 | 6325 | - | 2 | B739_0005, B739_0006 |
| 6509 | 7187 | - | 2 | B739_0007, B739_0008 |
| 7423 | 8690 | - | 2 | B739_0009, B739_0010 |
| 9242 | 11906 | - | 3 | B739_0011, B739_0012, B739_0013 |
| 12233 | 12924 | - | 2 | B739_0014, B739_0015 |
| 15891 | 18950 | - | 4 | B739_0018, B739_0019, B739_0020, B739_0021 |
| 21422 | 22311 | - | 3 | B739_0026, B739_0027, B739_0028 |
| 40060 | 58740 | - | 11 | B739_0042, B739_0043, B739_0044, B739_0045, B739_0046, B739_0047, B739_0048, B739_0049, B739_0050, B739_0051, B739_0052 |
| 59502 | 63179 | - | 5 | B739_0054, B739_0055, B739_0056, B739_0057, B739_0058 |
| 64516 | 69207 | - | 4 | B739_0060, B739_0061, B739_0062, B739_0063 |
| 74575 | 76462 | - | 2 | B739_0069, B739_0070 |
| 80021 | 81275 | + | 2 | B739_0072, B739_0073 |
| 81320 | 89466 | - | 9 | B739_0074, B739_0075, B739_0076, B739_0077, B739_0078, B739_0079, B739_0080, B739_0081, B739_0082 |
| 89766 | 92021 | + | 3 | B739_0083, B739_0084, B739_0085 |
| 92137 | 96173 | + | 3 | B739_0086, B739_0087, B739_0088 |
| 96498 | 98715 | + | 3 | B739_0089, B739_0090, B739_0091 |
| 101060 | 114851 | - | 10 | B739_0094, B739_0095, B739_0096, B739_0097, B739_0098, B739_0099, B739_0100, B739_0101, B739_0102, B739_0103 |
| 114998 | 115907 | - | 2 | B739_0104, B739_0105 |
| 120221 | 122895 | + | 2 | B739_0109, B739_0110 |
| 128078 | 135126 | + | 4 | B739_0115, B739_0116, B739_0117, B739_0118 |
| 135208 | 139563 | - | 2 | B739_0119, B739_0120 |
| 140311 | 143032 | - | 2 | B739_0122, B739_0123 |
| 143925 | 144277 | + | 2 | B739_0125, B739_0126 |
| 146287 | 147040 | + | 2 | B739_0130, B739_0131 |
| 147184 | 149079 | - | 2 | B739_0132, B739_0133 |
| 150391 | 150863 | - | 2 | B739_0135, B739_0136 |
| 151202 | 153555 | - | 4 | B739_0137, B739_0138, B739_0139, B739_0140 |
| 155702 | 160314 | - | 3 | B739_0143, B739_0144, B739_0145 |
| 160425 | 161656 | - | 2 | B739_0146, B739_0147 |
| 162544 | 165035 | + | 3 | B739_0149, B739_0150, B739_0151 |
| 167828 | 169715 | - | 2 | B739_0155, B739_0156 |
| 170756 | 173856 | - | 4 | B739_0158, B739_0159, B739_0160, B739_0161 |
| 173970 | 175924 | - | 3 | B739_0162, B739_0163, B739_0164 |
| 176007 | 178651 | - | 4 | B739_0165, B739_0166, B739_0167, B739_0168 |
| 178864 | 180891 | - | 2 | B739_0169, B739_0170 |

| | | | | |
|--------|--------|---|---|---|
| 181056 | 183166 | - | 2 | B739_0171, B739_0172 |
| 183371 | 192169 | + | 6 | B739_0173, B739_0174, B739_0175, B739_0176, B739_0177, B739_0178 |
| 193007 | 194258 | + | 2 | B739_0180, B739_0181 |
| 194413 | 196270 | + | 2 | B739_0182, B739_0183 |
| 196255 | 197020 | - | 2 | B739_0184, B739_0185 |
| 197154 | 200304 | + | 3 | B739_0186, B739_0187, B739_0188 |
| 200427 | 206153 | + | 7 | B739_0189, B739_0190, B739_0191, B739_0192, B739_0193, B739_0194, B739_0195 |
| 207529 | 208828 | - | 2 | B739_0197, B739_0198 |
| 211570 | 216944 | - | 4 | B739_0201, B739_0202, B739_0203, B739_0204 |
| 219254 | 220719 | - | 3 | B739_0208, B739_0209, B739_0210 |
| 224303 | 226748 | - | 3 | B739_0213, B739_0214, B739_0215 |
| 227011 | 230818 | + | 2 | B739_0216, B739_0217 |
| 232997 | 236734 | - | 3 | B739_0220, B739_0221, B739_0222 |
| 236914 | 241042 | - | 3 | B739_0223, B739_0224, B739_0225 |
| 241191 | 245789 | + | 5 | B739_0226, B739_0227, B739_0228, B739_0229, B739_0230 |
| 245835 | 249104 | - | 3 | B739_0231, B739_0232, B739_0233 |
| 249167 | 251009 | + | 3 | B739_0234, B739_0235, B739_0236 |
| 251160 | 252944 | - | 2 | B739_0237, B739_0238 |
| 253793 | 255687 | - | 3 | B739_0239, B739_0240, B739_0241 |
| 260360 | 261615 | - | 2 | B739_0247, B739_0248 |
| 262681 | 268123 | - | 4 | B739_0250, B739_0251, B739_0252, B739_0253 |
| 268572 | 270717 | + | 3 | B739_0255, B739_0256, B739_0257 |
| 270785 | 272531 | - | 2 | B739_0258, B739_0259 |
| 283363 | 292172 | + | 5 | B739_0266, B739_0267, B739_0268, B739_0269, B739_0270 |
| 299166 | 300376 | - | 2 | B739_0280, B739_0281 |
| 302476 | 304336 | - | 2 | B739_0286, B739_0287 |
| 308283 | 309731 | - | 2 | B739_0292, B739_0293 |
| 309994 | 313701 | + | 3 | B739_0294, B739_0295, B739_0296 |
| 313794 | 317184 | + | 4 | B739_0297, B739_0298, B739_0299, B739_0300 |
| 318545 | 320270 | - | 2 | B739_0302, B739_0303 |
| 329990 | 337015 | - | 3 | B739_0310, B739_0311, B739_0312 |
| 339265 | 341856 | + | 3 | B739_0315, B739_0316, B739_0317 |
| 350584 | 353054 | + | 2 | B739_0325, B739_0326 |
| 353216 | 356136 | + | 2 | B739_0327, B739_0328 |
| 366429 | 369090 | - | 6 | B739_0333, B739_0334, B739_0335, B739_0336, B739_0337, B739_0338 |
| 369564 | 370326 | - | 2 | B739_0339, B739_0340 |
| 370412 | 373512 | - | 5 | B739_0341, B739_0342, B739_0343, B739_0344, B739_0345 |
| 374414 | 376918 | - | 2 | B739_0347, B739_0348 |
| 379646 | 387824 | - | 2 | B739_0351, B739_0352 |
| 389168 | 391756 | + | 2 | B739_0355, B739_0356 |

| | | | | |
|--------|--------|---|---|--|
| 391828 | 393934 | - | 4 | B739_0357, B739_0358, B739_0359, B739_0360 |
| 394162 | 394858 | - | 2 | B739_0361, B739_0362 |
| 398137 | 399329 | - | 2 | B739_0365, B739_0366 |
| 399795 | 401734 | + | 2 | B739_0368, B739_0369 |
| 401736 | 404308 | - | 4 | B739_0370, B739_0371, B739_0372, B739_0373 |
| 406940 | 413140 | + | 7 | B739_0375, B739_0376, B739_0377, B739_0378, B739_0379, B739_0380, B739_0381 |
| 414663 | 417114 | + | 3 | B739_0383, B739_0384, B739_0385 |
| 417313 | 418158 | + | 2 | B739_0386, B739_0387 |
| 419260 | 423140 | + | 2 | B739_0389, B739_0390 |
| 423362 | 424742 | + | 2 | B739_0391, B739_0392 |
| 428357 | 434168 | + | 5 | B739_0396, B739_0397, B739_0398, B739_0399, B739_0400 |
| 434256 | 437424 | - | 2 | B739_0401, B739_0402 |
| 437602 | 439468 | - | 2 | B739_0403, B739_0404 |
| 444059 | 446739 | + | 3 | B739_0409, B739_0410, B739_0411 |
| 446747 | 451623 | - | 5 | B739_0412, B739_0413, B739_0414, B739_0415, B739_0416 |
| 451784 | 452792 | - | 2 | B739_0417, B739_0418 |
| 452857 | 453690 | - | 2 | B739_0419, B739_0420 |
| 453800 | 461669 | - | 8 | B739_0421, B739_0422, B739_0423, B739_0424, B739_0425, B739_0426, B739_0427, B739_0428 |
| 461716 | 462639 | + | 2 | B739_0429, B739_0430 |
| 462627 | 467642 | - | 6 | B739_0431, B739_0432, B739_0433, B739_0434, B739_0435, B739_0436 |
| 470207 | 472360 | + | 2 | B739_0438, B739_0439 |
| 472416 | 476313 | - | 6 | B739_0440, B739_0441, B739_0442, B739_0443, B739_0444, B739_0445 |
| 478625 | 481141 | - | 2 | B739_0448, B739_0449 |
| 482819 | 487215 | + | 6 | B739_0451, B739_0452, B739_0453, B739_0454, B739_0455, B739_0456 |
| 487379 | 494390 | + | 6 | B739_0457, B739_0458, B739_0459, B739_0460, B739_0461, B739_0462 |
| 494851 | 497527 | + | 2 | B739_0464, B739_0465 |
| 497550 | 500169 | - | 2 | B739_0466, B739_0467 |
| 500895 | 502827 | + | 2 | B739_0469, B739_0470 |
| 507067 | 508018 | - | 2 | B739_0475, B739_0476 |
| 508083 | 508497 | - | 2 | B739_0477, B739_0478 |
| 510474 | 513811 | - | 4 | B739_0480, B739_0481, B739_0482, B739_0483 |
| 513979 | 517905 | - | 4 | B739_0484, B739_0485, B739_0486, B739_0487 |
| 519813 | 523304 | + | 3 | B739_0491, B739_0492, B739_0493 |
| 527140 | 529344 | - | 2 | B739_0497, B739_0498 |
| 532119 | 533787 | + | 2 | B739_0501, B739_0502 |
| 539555 | 541267 | - | 3 | B739_0507, B739_0508, B739_0509 |
| 542269 | 546165 | + | 4 | B739_0511, B739_0512, B739_0513, B739_0514 |
| 547408 | 548632 | - | 2 | B739_0516, B739_0517 |
| 549924 | 551473 | + | 2 | B739_0519, B739_0520 |

| | | | | |
|--------|--------|---|---|---|
| 551868 | 554373 | - | 2 | B739_0522, B739_0523 |
| 554475 | 561737 | - | 7 | B739_0524, B739_0525, B739_0526, B739_0527, B739_0528, B739_0529, B739_0530 |
| 561797 | 564199 | - | 3 | B739_0531, B739_0532, B739_0533 |
| 567100 | 567704 | + | 2 | B739_0536, B739_0537 |
| 567867 | 569951 | + | 2 | B739_0538, B739_0539 |
| 570582 | 573541 | + | 2 | B739_0541, B739_0542 |
| 579725 | 582889 | + | 4 | B739_0548, B739_0549, B739_0550, B739_0551 |
| 583661 | 585350 | + | 3 | B739_0553, B739_0554, B739_0555 |
| 585364 | 587203 | - | 2 | B739_0556, B739_0557 |
| 587333 | 590761 | - | 3 | B739_0558, B739_0559, B739_0560 |
| 593696 | 595261 | + | 2 | B739_0563, B739_0564 |
| 596359 | 598042 | + | 2 | B739_0566, B739_0567 |
| 604311 | 607733 | + | 4 | B739_0573, B739_0574, B739_0575, B739_0576 |
| 607863 | 608479 | + | 2 | B739_0577, B739_0578 |
| 608564 | 619463 | - | 6 | B739_0579, B739_0580, B739_0581, B739_0582, B739_0583, B739_0584 |
| 629647 | 630783 | + | 2 | B739_0592, B739_0593 |
| 631055 | 633379 | - | 2 | B739_0594, B739_0595 |
| 634159 | 636583 | + | 2 | B739_0597, B739_0598 |
| 652464 | 653070 | + | 2 | B739_0609, B739_0610 |
| 653996 | 657347 | + | 2 | B739_0612, B739_0613 |
| 658706 | 661205 | - | 3 | B739_0616, B739_0617, B739_0618 |
| 661669 | 664678 | - | 4 | B739_0619, B739_0620, B739_0621, B739_0622 |
| 664776 | 666259 | - | 3 | B739_0623, B739_0624, B739_0625 |
| 668010 | 670377 | - | 3 | B739_0627, B739_0628, B739_0629 |
| 670433 | 674171 | - | 3 | B739_0630, B739_0631, B739_0632 |
| 674663 | 677830 | - | 3 | B739_0633, B739_0634, B739_0635 |
| 685072 | 687429 | - | 2 | B739_0643, B739_0644 |
| 689504 | 691762 | - | 3 | B739_0647, B739_0648, B739_0649 |
| 691959 | 692826 | + | 3 | B739_0650, B739_0651, B739_0652 |
| 694618 | 697591 | - | 2 | B739_0654, B739_0655 |
| 697679 | 700971 | - | 2 | B739_0656, B739_0657 |
| 701075 | 707921 | - | 5 | B739_0658, B739_0659, B739_0660, B739_0661, B739_0662 |
| 709460 | 710025 | - | 3 | B739_0665, B739_0666, B739_0667 |
| 710333 | 715040 | - | 4 | B739_0668, B739_0669, B739_0670, B739_0671 |
| 715711 | 719469 | - | 5 | B739_0673, B739_0674, B739_0675, B739_0676, B739_0677 |
| 719555 | 727927 | - | 6 | B739_0678, B739_0679, B739_0680, B739_0681, B739_0682, B739_0683 |
| 728143 | 728788 | + | 2 | B739_0684, B739_0685 |
| 729636 | 731112 | - | 3 | B739_0687, B739_0688, B739_0689 |
| 733070 | 737187 | - | 3 | B739_0692, B739_0693, B739_0694 |
| 737825 | 739542 | + | 3 | B739_0696, B739_0697, B739_0698 |

| | | | | |
|--------|--------|---|----|---|
| 744540 | 750396 | - | 5 | B739_0703, B739_0704, B739_0705, B739_0706, B739_0707 |
| 751530 | 755588 | + | 4 | B739_0709, B739_0710, B739_0711, B739_0712 |
| 755667 | 756824 | - | 2 | B739_0713, B739_0714 |
| 756949 | 759435 | + | 2 | B739_0715, B739_0716 |
| 759651 | 761977 | - | 3 | B739_0717, B739_0718, B739_0719 |
| 762041 | 765079 | + | 2 | B739_0720, B739_0721 |
| 765082 | 769400 | - | 3 | B739_0722, B739_0723, B739_0724 |
| 769581 | 771625 | + | 3 | B739_0725, B739_0726, B739_0727 |
| 774122 | 777067 | - | 4 | B739_0732, B739_0733, B739_0734, B739_0735 |
| 778300 | 779217 | + | 2 | B739_0737, B739_0738 |
| 779330 | 783261 | - | 5 | B739_0739, B739_0740, B739_0741, B739_0742, B739_0743 |
| 783420 | 785635 | - | 2 | B739_0744, B739_0745 |
| 786319 | 788925 | + | 2 | B739_0747, B739_0748 |
| 790887 | 796188 | - | 7 | B739_0751, B739_0752, B739_0753, B739_0754, B739_0755, B739_0756, B739_0757 |
| 796295 | 797097 | - | 2 | B739_0758, B739_0759 |
| 799170 | 800460 | - | 2 | B739_0761, B739_0762 |
| 800544 | 804349 | - | 2 | B739_0763, B739_0764 |
| 805965 | 811034 | + | 3 | B739_0766, B739_0767, B739_0768 |
| 813844 | 814259 | + | 2 | B739_0771, B739_0772 |
| 814317 | 815871 | - | 2 | B739_0773, B739_0774 |
| 815916 | 818005 | + | 3 | B739_0775, B739_0776, B739_0777 |
| 820886 | 826573 | - | 3 | B739_0780, B739_0781, B739_0782 |
| 829985 | 832589 | + | 2 | B739_0786, B739_0787 |
| 838954 | 843383 | - | 2 | B739_0793, B739_0794 |
| 844691 | 846455 | - | 2 | B739_0796, B739_0797 |
| 852194 | 853191 | + | 2 | B739_0801, B739_0802 |
| 853202 | 858722 | - | 3 | B739_0803, B739_0804, B739_0805 |
| 858889 | 861987 | + | 3 | B739_0806, B739_0807, B739_0808 |
| 862291 | 865957 | - | 2 | B739_0809, B739_0810 |
| 866324 | 869868 | + | 3 | B739_0811, B739_0812, B739_0813 |
| 872930 | 877360 | + | 4 | B739_0817, B739_0818, B739_0819, B739_0820 |
| 878211 | 880723 | - | 3 | B739_0821, B739_0822, B739_0823 |
| 882638 | 884813 | + | 3 | B739_0825, B739_0826, B739_0827 |
| 885012 | 890334 | + | 5 | B739_0828, B739_0829, B739_0830, B739_0831, B739_0832 |
| 890397 | 892429 | + | 3 | B739_0833, B739_0834, B739_0835 |
| 901514 | 902600 | - | 2 | B739_0839, B739_0840 |
| 903650 | 915289 | + | 10 | B739_0842, B739_0843, B739_0844, B739_0845, B739_0846, B739_0847, B739_0848, B739_0849, B739_0850, B739_0851 |
| 915371 | 919286 | + | 3 | B739_0852, B739_0853, B739_0854 |
| 919371 | 921559 | - | 2 | B739_0855, B739_0856 |

| | | | | |
|---------|---------|---|----|--|
| 923512 | 925750 | - | 2 | B739_0858, B739_0859 |
| 929289 | 932988 | + | 4 | B739_0864, B739_0865, B739_0866, B739_0867 |
| 934662 | 940893 | + | 4 | B739_0870, B739_0871, B739_0872, B739_0873 |
| 940958 | 946265 | - | 3 | B739_0874, B739_0875, B739_0876 |
| 952536 | 954598 | - | 2 | B739_0882, B739_0883 |
| 956511 | 957885 | + | 3 | B739_0886, B739_0887, B739_0888 |
| 959445 | 964502 | + | 5 | B739_0890, B739_0891, B739_0892, B739_0893, B739_0894 |
| 964510 | 965796 | - | 2 | B739_0895, B739_0896 |
| 968175 | 970465 | + | 2 | B739_0898, B739_0899 |
| 971106 | 972411 | + | 2 | B739_0901, B739_0902 |
| 973628 | 974856 | - | 3 | B739_0904, B739_0905, B739_0906 |
| 977804 | 981958 | + | 5 | B739_0910, B739_0911, B739_0912, B739_0913, B739_0914 |
| 984759 | 988125 | - | 2 | B739_0917, B739_0918 |
| 990618 | 992345 | + | 2 | B739_0922, B739_0923 |
| 992309 | 994363 | - | 3 | B739_0924, B739_0925, B739_0926 |
| 1001275 | 1004390 | + | 5 | B739_0931, B739_0932, B739_0933, B739_0934, B739_0935 |
| 1004478 | 1006944 | + | 2 | B739_0936, B739_0937 |
| 1007528 | 1009332 | - | 2 | B739_0939, B739_0940 |
| 1012308 | 1013534 | - | 2 | B739_0943, B739_0944 |
| 1013857 | 1018052 | + | 4 | B739_0945, B739_0946, B739_0947, B739_0948 |
| 1018114 | 1021918 | - | 5 | B739_0949, B739_0950, B739_0951, B739_0952, B739_0953 |
| 1024894 | 1026886 | + | 2 | B739_0955, B739_0956 |
| 1026998 | 1031015 | + | 4 | B739_0957, B739_0958, B739_0959, B739_0960 |
| 1031875 | 1034980 | - | 2 | B739_0962, B739_0963 |
| 1037161 | 1038424 | - | 2 | B739_0965, B739_0966 |
| 1038727 | 1041105 | + | 4 | B739_0967, B739_0968, B739_0969, B739_0970 |
| 1041392 | 1042499 | + | 2 | B739_0971, B739_0972 |
| 1042610 | 1045046 | + | 7 | B739_0973, B739_0974, B739_0975, B739_0976, B739_0977, B739_0978, B739_0979 |
| 1045233 | 1052473 | + | 14 | B739_0980, B739_0981, B739_0982, B739_0983, B739_0984, B739_0985, B739_0986, B739_0987, B739_0988, B739_0989, B739_0990, B739_0991, B739_0992, B739_0993 |
| 1052562 | 1054648 | - | 2 | B739_0994, B739_0995 |
| 1057608 | 1061130 | - | 3 | B739_0998, B739_0999, B739_1000 |
| 1063152 | 1066771 | - | 4 | B739_1002, B739_1003, B739_1004, B739_1005 |
| 1066880 | 1071179 | - | 2 | B739_1006, B739_1007 |
| 1071324 | 1072884 | + | 2 | B739_1008, B739_1515 |
| 1072945 | 1074555 | + | 2 | B739_1010, B739_1011 |
| 1074634 | 1078884 | + | 4 | B739_1012, B739_1013, B739_1014, B739_1015 |
| 1078990 | 1081073 | + | 2 | B739_1016, B739_1017 |
| 1083101 | 1086822 | + | 3 | B739_1021, B739_1022, B739_1023 |

| | | | |
|-----------------|---|---|---|
| 1087668 1090261 | + | 2 | B739_1025, B739_1026 |
| 1092104 1094300 | - | 2 | B739_1028, B739_1029 |
| 1099681 1102255 | + | 2 | B739_1035, B739_1036 |
| 1102313 1104390 | - | 3 | B739_1037, B739_1038, B739_1039 |
| 1105286 1112898 | - | 2 | B739_1042, B739_1043 |
| 1113069 1117482 | - | 2 | B739_1044, B739_1045 |
| 1117860 1120371 | + | 4 | B739_1046, B739_1047, B739_1048, B739_1049 |
| 1124489 1127169 | + | 2 | B739_1055, B739_1056 |
| 1127281 1129283 | + | 2 | B739_1057, B739_1058 |
| 1135173 1137530 | + | 2 | B739_1060, B739_1061 |
| 1138466 1141985 | + | 3 | B739_1063, B739_1064, B739_1065 |
| 1147558 1148464 | + | 2 | B739_1070, B739_1071 |
| 1149888 1151263 | + | 2 | B739_1073, B739_1074 |
| 1151325 1152270 | - | 2 | B739_1075, B739_1076 |
| 1153538 1155482 | - | 3 | B739_1078, B739_1079, B739_1080 |
| 1155641 1157028 | + | 2 | B739_1081, B739_1082 |
| 1158521 1163978 | + | 3 | B739_1085, B739_1086, B739_1087 |
| 1165702 1169899 | - | 2 | B739_1089, B739_1090 |
| 1174248 1176411 | + | 2 | B739_1094, B739_1095 |
| 1176536 1180073 | + | 3 | B739_1096, B739_1097, B739_1098 |
| 1182514 1186004 | + | 2 | B739_1101, B739_1102 |
| 1186825 1193178 | + | 3 | B739_1104, B739_1105, B739_1106 |
| 1194826 1195786 | + | 2 | B739_1108, B739_1109 |
| 1197974 1199479 | - | 2 | B739_1111, B739_1112 |
| 1199648 1203423 | + | 4 | B739_1113, B739_1114, B739_1115, B739_1116 |
| 1204487 1207624 | - | 3 | B739_1118, B739_1119, B739_1120 |
| 1211771 1218459 | + | 5 | B739_1124, B739_1125, B739_1126, B739_1127, B739_1128 |
| 1219634 1226489 | + | 7 | B739_1130, B739_1131, B739_1132, B739_1133, B739_1134, B739_1135, B739_1136 |
| 1226645 1229762 | + | 4 | B739_1137, B739_1138, B739_1139, B739_1140 |
| 1231768 1233549 | + | 3 | B739_1143, B739_1144, B739_1145 |
| 1233654 1236806 | + | 2 | B739_1146, B739_1147 |
| 1238871 1240185 | + | 2 | B739_1150, B739_1151 |
| 1240309 1241272 | + | 2 | B739_1152, B739_1153 |
| 1241355 1243108 | + | 2 | B739_1154, B739_1155 |
| 1243166 1245046 | + | 2 | B739_1156, B739_1157 |
| 1245154 1247241 | + | 2 | B739_1158, B739_1159 |
| 1247357 1253470 | + | 6 | B739_1160, B739_1161, B739_1162, B739_1163, B739_1164, B739_1165 |
| 1253598 1255446 | + | 3 | B739_1166, B739_1167, B739_1168 |
| 1262371 1265441 | + | 3 | B739_1173, B739_1174, B739_1175 |
| 1266283 1267735 | + | 2 | B739_1177, B739_1178 |

| | | | | |
|---------|---------|---|----|---|
| 1269525 | 1271994 | - | 3 | B739_1180, B739_1181, B739_1182 |
| 1278150 | 1283338 | - | 4 | B739_1187, B739_1188, B739_1189, B739_1190 |
| 1284444 | 1292533 | + | 9 | B739_1193, B739_1194, B739_1195, B739_1196, B739_1197, B739_1198, B739_1199, B739_1200, B739_1201 |
| 1295031 | 1297729 | - | 2 | B739_1205, B739_1206 |
| 1297887 | 1300387 | + | 2 | B739_1207, B739_1208 |
| 1301926 | 1303643 | + | 2 | B739_1210, B739_1211 |
| 1303755 | 1305965 | + | 2 | B739_1212, B739_1213 |
| 1308310 | 1310037 | - | 2 | B739_1216, B739_1217 |
| 1311409 | 1313245 | + | 2 | B739_1219, B739_1220 |
| 1313370 | 1315421 | + | 2 | B739_1221, B739_1222 |
| 1316479 | 1322824 | - | 6 | B739_1224, B739_1225, B739_1226, B739_1227, B739_1228, B739_1229 |
| 1323034 | 1324975 | + | 2 | B739_1230, B739_1231 |
| 1325004 | 1330670 | - | 6 | B739_1232, B739_1233, B739_1234, B739_1235, B739_1236, B739_1237 |
| 1330945 | 1332111 | + | 2 | B739_1238, B739_1239 |
| 1332150 | 1336334 | - | 5 | B739_1240, B739_1241, B739_1242, B739_1243, B739_1244 |
| 1336483 | 1337558 | - | 2 | B739_1245, B739_1246 |
| 1340035 | 1342889 | - | 2 | B739_1250, B739_1251 |
| 1343005 | 1345037 | - | 2 | B739_1252, B739_1253 |
| 1348333 | 1353405 | + | 2 | B739_1256, B739_1257 |
| 1353476 | 1354295 | - | 2 | B739_1258, B739_1259 |
| 1354820 | 1359570 | + | 6 | B739_1261, B739_1262, B739_1263, B739_1264, B739_1265, B739_1266 |
| 1359852 | 1362734 | + | 9 | B739_1267, B739_1268, B739_1269, B739_1270, B739_1271, B739_1272, B739_1273, B739_1274, B739_1275 |
| 1362861 | 1377988 | + | 20 | B739_1276, B739_1277, B739_1278, B739_1279, B739_1280, B739_1281, B739_1282, B739_1283, B739_1284, B739_1285, B739_1286, B739_1287, B739_1288, B739_1289, B739_1290, B739_1291, B739_1292, B739_1293, B739_1294, B739_1295 |
| 1378278 | 1379182 | + | 3 | B739_1296, B739_1297, B739_1298 |
| 1379338 | 1385150 | + | 9 | B739_1299, B739_1300, B739_1301, B739_1302, B739_1303, B739_1304, B739_1305, B739_1306, B739_1307 |
| 1385239 | 1386525 | - | 4 | B739_1308, B739_1309, B739_1310, B739_1311 |
| 1386917 | 1395409 | + | 3 | B739_1312, B739_1313, B739_1314 |
| 1396921 | 1400003 | - | 2 | B739_1316, B739_1317 |
| 1400194 | 1408340 | + | 8 | B739_1318, B739_1319, B739_1320, B739_1321, B739_1322, B739_1323, B739_1324, B739_1325 |
| 1408443 | 1410082 | + | 2 | B739_1326, B739_1327 |
| 1419830 | 1421033 | - | 2 | B739_1335, B739_1336 |
| 1421221 | 1422975 | + | 2 | B739_1337, B739_1338 |
| 1425956 | 1428911 | - | 2 | B739_1342, B739_1343 |
| 1437924 | 1442270 | - | 2 | B739_1351, B739_1352 |
| 1443632 | 1446624 | + | 4 | B739_1354, B739_1355, B739_1356, B739_1357 |
| 1446648 | 1446982 | - | 2 | B739_1358, B739_1359 |

| | | | |
|-----------------|---|----|---|
| 1447268 1447778 | - | 2 | B739_1360, B739_1361 |
| 1447911 1452801 | + | 10 | B739_1362, B739_1363, B739_1364, B739_1365, B739_1366, B739_1367, B739_1368, B739_1369, B739_1370, B739_1371 |
| 1459328 1459980 | - | 2 | B739_1375, B739_1376 |
| 1460010 1467226 | + | 8 | B739_1377, B739_1378, B739_1379, B739_1380, B739_1381, B739_1382, B739_1383, B739_1384 |
| 1469685 1473242 | - | 3 | B739_1386, B739_1387, B739_1388 |
| 1474538 1475410 | - | 2 | B739_1390, B739_1391 |
| 1475602 1476419 | + | 2 | B739_1392, B739_1393 |
| 1478280 1483780 | + | 4 | B739_1395, B739_1396, B739_1397, B739_1398 |
| 1484381 1488787 | + | 5 | B739_1400, B739_1401, B739_1402, B739_1403, B739_1404 |
| 1491477 1492808 | + | 2 | B739_1407, B739_1408 |
| 1492985 1494689 | - | 2 | B739_1409, B739_1410 |
| 1495208 1495838 | + | 2 | B739_1411, B739_1412 |
| 1495941 1498901 | + | 2 | B739_1413, B739_1414 |
| 1500046 1502773 | + | 2 | B739_1416, B739_1417 |
| 1503263 1509043 | + | 3 | B739_1418, B739_1419, B739_1420 |
| 1509208 1510045 | + | 2 | B739_1421, B739_1422 |
| 1510850 1512975 | - | 3 | B739_1425, B739_1426, B739_1427 |
| 1518519 1521145 | - | 3 | B739_1431, B739_1432, B739_1433 |
| 1522908 1524539 | - | 2 | B739_1435, B739_1436 |
| 1524791 1526861 | + | 2 | B739_1437, B739_1438 |
| 1526894 1534886 | - | 2 | B739_1439, B739_1440 |
| 1536512 1537972 | + | 3 | B739_1443, B739_1444, B739_1445 |
| 1538198 1539000 | + | 2 | B739_1446, B739_1447 |
| 1539149 1539829 | + | 2 | B739_1448, B739_1449 |
| 1540094 1542429 | + | 4 | B739_1450, B739_1451, B739_1452, B739_1453 |
| 1542892 1545101 | - | 3 | B739_1455, B739_1456, B739_1457 |
| 1548595 1550809 | + | 2 | B739_1462, B739_1463 |
| 1553573 1554039 | - | 2 | B739_1469, B739_1470 |
| 1554239 1555712 | - | 2 | B739_1471, B739_1472 |
| 1567169 1570195 | + | 4 | B739_1484, B739_1485, B739_1486, B739_1487 |
| 1570225 1572103 | - | 3 | B739_1488, B739_1489, B739_1490 |
| 1573299 1577503 | + | 6 | B739_1492, B739_1493, B739_1494, B739_1495, B739_1496, B739_1497 |
| 1578855 1580410 | + | 2 | B739_1499, B739_1500 |
| 1587806 1590250 | + | 3 | B739_1506, B739_1507, B739_1508 |
| 1590223 1593372 | - | 3 | B739_1509, B739_1510, B739_1511 |
| 1606143 1608282 | + | 2 | B739_1525, B739_1526 |
| 1609434 1612106 | + | 4 | B739_1528, B739_1529, B739_1530, B739_1531 |
| 1612243 1616658 | + | 6 | B739_1532, B739_1533, B739_1534, B739_1535, B739_1536, B739_1537 |
| 1617125 1618804 | + | 2 | B739_1538, B739_1539 |

| | | | |
|-----------------|---|---|--|
| 1620480 1622375 | + | 2 | B739_1541, B739_1542 |
| 1626097 1630086 | - | 2 | B739_1547, B739_1548 |
| 1630313 1631988 | - | 2 | B739_1549, B739_1550 |
| 1635815 1636484 | + | 2 | B739_1553, B739_1554 |
| 1637307 1640589 | - | 2 | B739_1556, B739_1557 |
| 1640877 1642577 | - | 2 | B739_1558, B739_1559 |
| 1645332 1647125 | + | 3 | B739_1562, B739_1563, B739_1564 |
| 1649674 1655373 | + | 4 | B739_1568, B739_1569, B739_1570, B739_1571 |
| 1655806 1658233 | - | 3 | B739_1573, B739_1574, B739_1575 |
| 1658261 1661944 | + | 4 | B739_1576, B739_1577, B739_1578, B739_1579 |
| 1664920 1668775 | - | 5 | B739_1582, B739_1583, B739_1584, B739_1585, B739_1586 |
| 1668926 1671554 | - | 3 | B739_1587, B739_1588, B739_1589 |
| 1672079 1676495 | + | 3 | B739_1590, B739_1591, B739_1592 |
| 1677342 1682046 | + | 4 | B739_1594, B739_1595, B739_1596, B739_1597 |
| 1682318 1683115 | - | 2 | B739_1598, B739_1599 |
| 1685099 1690047 | + | 6 | B739_1602, B739_1603, B739_1604, B739_1605, B739_1606, B739_1607 |
| 1690210 1692916 | + | 3 | B739_1608, B739_1609, B739_1610 |
| 1697123 1699146 | + | 2 | B739_1613, B739_1614 |
| 1702529 1704327 | + | 2 | B739_1616, B739_1617 |
| 1704429 1707414 | + | 2 | B739_1618, B739_1619 |
| 1707683 1711651 | - | 3 | B739_1620, B739_1621, B739_1622 |
| 1711719 1714219 | + | 2 | B739_1623, B739_1624 |
| 1716209 1718581 | + | 2 | B739_1626, B739_1627 |
| 1725245 1727802 | - | 2 | B739_1633, B739_1634 |
| 1729400 1738749 | - | 8 | B739_1636, B739_1637, B739_1638, B739_1639, B739_1640, B739_1641, B739_1642, B739_1643 |
| 1738978 1742162 | - | 6 | B739_1644, B739_1645, B739_1646, B739_1647, B739_1648, B739_1649 |
| 1743807 1745046 | - | 2 | B739_1652, B739_1653 |
| 1745510 1751103 | - | 7 | B739_1655, B739_1656, B739_1657, B739_1658, B739_1659, B739_1660, B739_1661 |
| 1751375 1753424 | - | 2 | B739_1662, B739_1663 |
| 1753587 1756397 | - | 4 | B739_1664, B739_1665, B739_1666, B739_1667 |
| 1756508 1757886 | - | 2 | B739_1668, B739_1669 |
| 1758041 1760272 | - | 4 | B739_1670, B739_1671, B739_1672, B739_1673 |
| 1761110 1761965 | - | 3 | B739_1675, B739_1676, B739_1677 |
| 1762193 1766415 | - | 3 | B739_1678, B739_1679, B739_1680 |
| 1773818 1775227 | + | 2 | B739_1686, B739_1687 |
| 1778178 1785384 | + | 7 | B739_1689, B739_1690, B739_1691, B739_1692, B739_1693, B739_1694, B739_1695 |
| 1786766 1789594 | + | 2 | B739_1697, B739_1698 |
| 1800030 1801478 | - | 3 | B739_1706, B739_1707, B739_1705 |
| 1801584 1802755 | - | 2 | B739_1709, B739_1710 |

| | | | |
|-----------------|---|----|---|
| 1802874 1803702 | - | 2 | B739_1718, B739_1719 |
| 1804051 1806646 | - | 3 | B739_1720, B739_1721, B739_1722 |
| 1808291 1812084 | + | 2 | B739_1724, B739_1725 |
| 1812148 1813412 | - | 2 | B739_1726, B739_1727 |
| 1815152 1816867 | + | 2 | B739_1730, B739_1731 |
| 1817558 1820820 | + | 4 | B739_1733, B739_1734, B739_1735, B739_1736 |
| 1822344 1824498 | + | 4 | B739_1738, B739_1739, B739_1740, B739_1741 |
| 1827686 1830895 | + | 3 | B739_1745, B739_1746, B739_1747 |
| 1830990 1833869 | - | 4 | B739_1748, B739_1749, B739_1750, B739_1751 |
| 1833945 1834569 | + | 2 | B739_1752, B739_1753 |
| 1839977 1845237 | + | 5 | B739_1760, B739_1761, B739_1762, B739_1763, B739_1764 |
| 1847768 1848716 | - | 2 | B739_1766, B739_1767 |
| 1851012 1853186 | + | 2 | B739_1770, B739_1771 |
| 1858601 1861108 | - | 4 | B739_1777, B739_1778, B739_1779, B739_1780 |
| 1861237 1868573 | - | 5 | B739_1781, B739_1782, B739_1783, B739_1784, B739_1785 |
| 1869179 1872705 | + | 5 | B739_1787, B739_1788, B739_1789, B739_1790, B739_1791 |
| 1875138 1878367 | - | 3 | B739_1795, B739_1796, B739_1797 |
| 1878593 1881458 | - | 3 | B739_1798, B739_1799, B739_1800 |
| 1885069 1889446 | + | 2 | B739_1803, B739_1804 |
| 1890407 1893358 | - | 3 | B739_1805, B739_1806, B739_1807 |
| 1893638 1895933 | + | 3 | B739_1808, B739_1809, B739_1810 |
| 1897440 1901008 | - | 8 | B739_1812, B739_1813, B739_1814, B739_1815, B739_1816, B739_1817, B739_1818, B739_1819 |
| 1901677 1904450 | + | 4 | B739_1820, B739_1821, B739_1822, B739_1823 |
| 1906165 1908113 | - | 3 | B739_1826, B739_1827, B739_1828 |
| 1918047 1924012 | - | 3 | B739_1839, B739_1840, B739_1841 |
| 1924306 1925413 | - | 2 | B739_1842, B739_1843 |
| 1926002 1926733 | - | 2 | B739_1845, B739_1846 |
| 1929114 1937727 | + | 12 | B739_1848, B739_1849, B739_1850, B739_1851, B739_1852, B739_1853, B739_1854, B739_1855, B739_1856, B739_1857, B739_1858, B739_1859 |
| 1939688 1948308 | - | 5 | B739_1861, B739_1862, B739_1863, B739_1864, B739_1865 |
| 1948520 1949100 | + | 2 | B739_1866, B739_1867 |
| 1951067 1952269 | + | 2 | B739_1869, B739_1870 |
| 1954500 1956989 | - | 3 | B739_1872, B739_1873, B739_1874 |
| 1958482 1963127 | - | 3 | B739_1877, B739_1878, B739_1879 |
| 1966130 1969497 | + | 2 | B739_1881, B739_1882 |
| 1970040 1971512 | - | 2 | B739_1884, B739_1885 |
| 1971615 1976057 | - | 2 | B739_1886, B739_1887 |
| 1979864 1984400 | - | 2 | B739_1890, B739_1891 |
| 1990398 1991999 | - | 2 | B739_1896, B739_1897 |
| 2003936 2007359 | + | 2 | B739_1904, B739_1905 |

| | | | |
|-----------------|---|---|--|
| 2007410 2008590 | - | 2 | B739_1906, B739_1907 |
| 2008808 2013566 | - | 2 | B739_1908, B739_1909 |
| 2015361 2016983 | - | 2 | B739_1911, B739_1912 |
| 2025859 2029560 | + | 4 | B739_1923, B739_1924, B739_1925, B739_1926 |
| 2029600 2032036 | - | 2 | B739_1927, B739_1928 |
| 2033461 2038744 | - | 6 | B739_1930, B739_1931, B739_1932, B739_1933, B739_1934, B739_1935 |
| 2038961 2039715 | - | 2 | B739_1936, B739_1937 |
| 2039982 2043878 | - | 5 | B739_1938, B739_1939, B739_1940, B739_1941, B739_1942 |
| 2044390 2048297 | + | 3 | B739_1944, B739_1945, B739_1946 |
| 2051023 2058025 | + | 7 | B739_1949, B739_1950, B739_1951, B739_1952, B739_1953, B739_1954, B739_1955 |
| 2058155 2059350 | + | 2 | B739_1956, B739_1957 |
| 2060707 2070030 | - | 7 | B739_1959, B739_1960, B739_1961, B739_1962, B739_1963, B739_1964, B739_1965 |
| 2070135 2075115 | - | 8 | B739_1966, B739_1967, B739_1968, B739_1969, B739_1970, B739_1971, B739_1972, B739_1973 |
| 2075105 2078993 | + | 5 | B739_1974, B739_1975, B739_1976, B739_1977, B739_1978 |
| 2080497 2081444 | + | 2 | B739_1980, B739_1981 |
| 2082328 2084036 | - | 5 | B739_1983, B739_1984, B739_1985, B739_1986, B739_1987 |
| 2084463 2086269 | - | 5 | B739_1989, B739_1990, B739_1991, B739_1992, B739_1993 |
| 2086473 2089978 | - | 3 | B739_1994, B739_1995, B739_1996 |
| 2090472 2091769 | - | 4 | B739_1997, B739_1998, B739_1999, B739_2000 |
| 2094882 2103813 | - | 4 | B739_2005, B739_2006, B739_2007, B739_2008 |
| 2103980 2106584 | - | 4 | B739_2009, B739_2010, B739_2011, B739_2012 |
| 2107518 2108286 | - | 2 | B739_2015, B739_2016 |
| 2110440 2111000 | + | 2 | B739_2019, B739_2020 |
| 2114928 2117296 | - | 3 | B739_2022, B739_2023, B739_2024 |
| 2117437 2120722 | + | 2 | B739_2025, B739_2026 |
| 2120734 2124535 | - | 4 | B739_2027, B739_2028, B739_2029, B739_2030 |
| 2124667 2129698 | - | 2 | B739_2031, B739_2032 |
| 2129930 2132879 | + | 2 | B739_2033, B739_2034 |
| 2133945 2135828 | - | 2 | B739_2037, B739_2038 |
| 2137107 2139686 | - | 2 | B739_2040, B739_2041 |
| 2139826 2145049 | + | 6 | B739_2042, B739_2043, B739_2044, B739_2045, B739_2046, B739_2047 |
| 2145073 2148430 | - | 4 | B739_2048, B739_2049, B739_2050, B739_2051 |
| 2148593 2151699 | + | 4 | B739_2052, B739_2053, B739_2054, B739_2055 |
| 2151718 2153937 | - | 3 | B739_2056, B739_2057, B739_2058 |
| 2156813 2161344 | - | 4 | B739_2062, B739_2063, B739_2064, B739_2065 |
| 2164404 2165644 | - | 2 | B739_2069, B739_2070 |
| 2166913 2168337 | - | 2 | B739_2072, B739_2073 |
| 2168482 2174635 | + | 6 | B739_2074, B739_2075, B739_2076, B739_2077, B739_2078, B739_2079 |
| 2174632 2175829 | - | 2 | B739_2080, B739_2081 |

| | | | | |
|---------|---------|---|---|--|
| 2176473 | 2178772 | - | 2 | B739_2082, B739_2083 |
| 2179036 | 2179357 | + | 2 | B739_2084, B739_2085 |
| 2180240 | 2181881 | - | 3 | B739_2087, B739_2088, B739_2089 |
| 2185491 | 2192068 | - | 3 | B739_2091, B739_2092, B739_2093 |
| 2194901 | 2196820 | - | 3 | B739_2097, B739_2098, B739_2099 |
| 2196976 | 2199709 | - | 3 | B739_2100, B739_2101, B739_2102 |
| 2199810 | 2201866 | + | 3 | B739_2103, B739_2104, B739_2105 |
| 2201904 | 2203636 | - | 2 | B739_2106, B739_2107 |
| 2209021 | 2209844 | + | 2 | B739_2110, B739_2111 |
| 2209859 | 2211009 | - | 2 | B739_2112, B739_2113 |
| 2213140 | 2217241 | - | 2 | B739_2116, B739_2117 |
| 2219223 | 2220113 | + | 2 | B739_2119, B739_2120 |
| 2220110 | 2222098 | - | 3 | B739_2121, B739_2122, B739_2123 |
| 2222252 | 2223605 | + | 2 | B739_2124, B739_2125 |
| 2224017 | 2224650 | + | 2 | B739_2127, B739_2128 |
| 2224833 | 2226164 | + | 2 | B739_2129, B739_2130 |
| 2226322 | 2228273 | - | 3 | B739_2131, B739_2132, B739_2133 |
| 2228421 | 2228909 | - | 2 | B739_2134, B739_2135 |
| 2232541 | 2235298 | + | 2 | B739_2139, B739_2140 |
| 2235680 | 2238616 | + | 3 | B739_2141, B739_2142, B739_2143 |
| 2240677 | 2243517 | - | 2 | B739_2147, B739_2148 |
| 2243833 | 2246219 | - | 2 | B739_2149, B739_2150 |
| 2246314 | 2247460 | - | 2 | B739_2151, B739_2152 |
| 2247580 | 2249446 | - | 2 | B739_2153, B739_2154 |
| 2249520 | 2252072 | - | 3 | B739_2155, B739_2156, B739_2157 |
| 2252207 | 2253509 | + | 2 | B739_2158, B739_2159 |
| 2253658 | 2256671 | + | 2 | B739_2160, B739_2161 |
| 2256875 | 2265044 | + | 6 | B739_2162, B739_2163, B739_2164, B739_2165, B739_2166, B739_2167 |
| 2268097 | 2270440 | - | 2 | B739_2169, B739_2170 |
| 2272190 | 2279106 | + | 8 | B739_2174, B739_2175, B739_2176, B739_2177, B739_2178, B739_2179, B739_2180, B739_2181 |
| 2280583 | 2281573 | + | 2 | B739_2183, B739_2184 |
| 2281714 | 2290046 | + | 8 | B739_2185, B739_2186, B739_2187, B739_2188, B739_2189, B739_2190, B739_2191, B739_2192 |
| 2290118 | 2291490 | - | 2 | B739_2193, B739_2194 |
| 2291602 | 2293397 | - | 3 | B739_2195, B739_2196, B739_2197 |
| 2294198 | 2296956 | - | 3 | B739_2199, B739_2200, B739_2201 |
| | 2299057 | - | 2 | B739_2202, B739_2203 |
| 2301832 | 2304793 | - | 3 | B739_2207, B739_2208, B739_2209 |
| 2306361 | 2306988 | - | 2 | B739_2211, B739_2212 |

Table S3 Genes down-regulated in *Riemerella anatipestifer* CH-1 in iron-depleted conditions.

| Gene ID | Genename | log2.Fold_change. | p-value | Description |
|----------|-----------|-------------------|-----------|--|
| 13715110 | B739_0004 | -3.5536 | 8.39E-07 | hypothetical protein |
| 13715111 | B739_0005 | -1.1676 | 3.80E-05 | phospholipid-binding protein |
| 13715134 | B739_0029 | -1.2168 | 3.45E-13 | Co/Zn/Cd efflux system protein |
| 13715136 | B739_0031 | -2.1584 | 3.03E-07 | Beta-lactamase class |
| 13715137 | B739_0032 | -1.8951 | 7.80E-11 | hypothetical protein |
| 13715147 | B739_0042 | -1.0642 | 2.12E-12 | hypothetical protein |
| 13715148 | B739_0043 | -2.4394 | 6.03E-15 | hypothetical protein |
| 13715149 | B739_0044 | -2.6016 | 1.67E-13 | hypothetical protein |
| 13715150 | B739_0045 | -2.8968 | 1.17E-23 | hypothetical protein |
| 13715151 | B739_0046 | -2.9077 | 5.03E-20 | hypothetical protein |
| 13715152 | B739_0047 | -2.5115 | 4.98E-15 | hypothetical protein |
| 13715153 | B739_0048 | -2.1246 | 1.08E-32 | hypothetical protein |
| 13715154 | B739_0049 | -2.7847 | 8.28E-15 | Beta-glucanase/Beta-glucan synthetase |
| 13715155 | B739_0050 | -2.8906 | 2.36E-21 | hypothetical protein |
| 13715156 | B739_0051 | -2.0365 | 5.33E-14 | hypothetical protein |
| 13715157 | B739_0052 | -1.6093 | 1.26E-13 | hypothetical protein |
| 13715158 | B739_0053 | -2.0708 | 0.0028284 | hypothetical protein |
| 13715161 | B739_0056 | -1.9079 | 2.69E-19 | Adenosylmethionine-8-amino-7-oxononanoate aminotransferase |
| 13715162 | B739_0057 | -1.2533 | 5.18E-05 | dethiobiotin synthetase |
| 13715165 | B739_0060 | -1.4615 | 1.85E-09 | hypothetical protein |
| 13715166 | B739_0061 | -1.055 | 3.52E-10 | Methionine synthase I, cobalamin-binding domain-containing protein |
| 13715171 | B739_0067 | -4.2429 | 0.0045972 | hypothetical protein |
| 13715175 | B739_0071 | -2.6004 | 1.89E-22 | hypothetical protein |
| 13715180 | B739_0076 | -1.2584 | 7.39E-23 | hypothetical protein |
| 13715181 | B739_0077 | -1.1447 | 6.19E-31 | hypothetical protein |
| 13715182 | B739_0078 | -1.6657 | 1.08E-15 | hypothetical protein |
| 13715183 | B739_0079 | -1.3042 | 2.98E-16 | hypothetical protein |
| 13715184 | B739_0080 | -1.1427 | 8.20E-14 | hypothetical protein |
| 13715185 | B739_0081 | -1.26 | 2.78E-17 | hypothetical protein |
| 13715186 | B739_0082 | -1.3805 | 1.34E-39 | MoxR-like ATPase |
| 13715194 | B739_0090 | -2.0234 | 2.67E-12 | hypothetical protein |
| 13715195 | B739_0091 | -2.1064 | 1.61E-05 | hypothetical protein |
| 13715210 | B739_0106 | -1.2278 | 1.10E-13 | amino acid transporter |
| 13715219 | B739_0115 | -2.4021 | 4.38E-24 | hypothetical protein |
| 13715220 | B739_0116 | -2.6776 | 6.38E-15 | hypothetical protein |
| 13715221 | B739_0117 | -3.3195 | 5.54E-23 | hypothetical protein |

| | | | | |
|----------|-----------|---------|------------|---|
| 13715222 | B739_0118 | -3.0343 | 2.79E-10 | hypothetical protein |
| 13715228 | B739_0124 | -3.6112 | 4.42E-07 | hypothetical protein |
| 13715230 | B739_0126 | -1.3626 | 0.011918 | hypothetical protein |
| 13715234 | B739_0130 | -3.9687 | 0.01111 | hypothetical protein |
| 13715239 | -//- | -1.2832 | 0.010073 | |
| 13715241 | B739_0137 | -2.372 | 0.0008521 | hypothetical protein |
| 13715242 | B739_0138 | -2.9944 | 8.25E-16 | hypothetical protein |
| 13715243 | B739_0139 | -3.0942 | 0.00089462 | hypothetical protein |
| 13715244 | B739_0140 | -2.6299 | 0.0057319 | hypothetical protein |
| 13715246 | B739_0142 | -2.5197 | 0.0090963 | hypothetical protein |
| 13715262 | B739_0158 | -1.1043 | 0.0010055 | hypothetical protein |
| 13715263 | B739_0159 | -1.1274 | 9.66E-05 | hypothetical protein |
| 13715273 | B739_0169 | -1.0421 | 1.90E-49 | stress-responsive transcriptional regulator |
| 13715287 | B739_0183 | -1.3845 | 4.24E-05 | hypothetical protein |
| 13715288 | B739_0184 | -1.7237 | 0.0022932 | hypothetical protein |
| 13715290 | B739_0186 | -3.1274 | 9.26E-06 | hypothetical protein |
| 13715291 | B739_0187 | -2.8206 | 1.19E-27 | hypothetical protein |
| 13715292 | B739_0188 | -2.7019 | 7.24E-05 | hypothetical protein |
| 13715293 | B739_0189 | -2.3067 | 0.0056787 | hypothetical protein |
| 13715294 | B739_0190 | -2.0762 | 5.10E-08 | hypothetical protein |
| 13715295 | B739_0191 | -2.4565 | 4.13E-06 | hypothetical protein |
| 13715296 | B739_0192 | -2.8836 | 6.67E-09 | hypothetical protein |
| 13715300 | B739_2167 | -1.2016 | 2.48E-12 | hypothetical protein |
| 13715305 | B739_2172 | -2.8326 | 2.27E-05 | hypothetical protein |
| 13715326 | B739_2193 | -1.8957 | 5.22E-07 | hypothetical protein |
| 13715327 | B739_2194 | -2.4037 | 1.91E-11 | hypothetical protein |
| 13715328 | B739_2195 | -1.2439 | 0.00063856 | hypothetical protein |
| 13715329 | B739_2196 | -1.2511 | 0.0065652 | hypothetical protein |
| 13715332 | B739_2199 | -3.5295 | 7.53E-20 | hypothetical protein |
| 13715333 | B739_2200 | -2.3811 | 0.011733 | GTPase subunit of restriction endonuclease |
| 13715335 | B739_2202 | -2.1686 | 2.58E-07 | hypothetical protein |
| 13715336 | B739_2203 | -1.4753 | 9.34E-07 | hypothetical protein |
| 13715337 | B739_2204 | -2.2529 | 0.0001849 | hypothetical protein |
| 13715338 | B739_2205 | -2.9347 | 2.16E-11 | hypothetical protein |
| 13715339 | B739_2206 | -1.813 | 5.47E-06 | hypothetical protein |
| 13715340 | B739_2207 | -2.7648 | 0.010402 | hypothetical protein |
| 13715371 | B739_1538 | -1.3763 | 1.59E-64 | hypothetical protein |
| 13715396 | B739_0855 | -1.1762 | 2.05E-12 | NAD-dependent aldehyde dehydrogenase |
| 13715415 | B739_0874 | -2.4597 | 3.04E-11 | hypothetical protein |
| 13715416 | B739_0875 | -2.7261 | 5.59E-15 | hypothetical protein |
| 13715417 | B739_0876 | -2.7217 | 1.24E-40 | hypothetical protein |

| | | | | |
|----------|-----------|---------|------------|--|
| 13715419 | B739_0878 | -2.5032 | 3.13E-09 | hypothetical protein |
| 13715423 | B739_0882 | -1.5611 | 1.12E-06 | hypothetical protein |
| 13715435 | B739_0894 | -1.1395 | 3.15E-12 | hypothetical protein |
| 13715442 | B739_0901 | -1.1851 | 3.92E-15 | Fe-S oxidoreductase |
| 13715446 | B739_0906 | -3.4672 | 0.00079524 | hypothetical protein |
| 13715447 | B739_0907 | -1.8975 | 1.13E-19 | hypothetical protein |
| 13715448 | B739_0908 | -1.633 | 1.80E-08 | hypothetical protein |
| 13715449 | B739_0909 | -1.7075 | 4.63E-11 | hypothetical protein |
| 13715456 | B739_0916 | -1.3801 | 1.52E-10 | hydrolase |
| 13715467 | B739_0927 | -1.9127 | 9.71E-160 | Trypsin-like serine protease |
| 13715478 | -/- | -2.1179 | 0.00020597 | |
| 13715483 | B739_0943 | -3.066 | 7.51E-12 | hypothetical protein |
| 13715486 | B739_0946 | -1.881 | 4.26E-38 | Formate-dependent nitrite reductase, periplasmic cytochrome c552 subunit |
| 13715487 | B739_0947 | -2.0873 | 1.04E-17 | hypothetical protein |
| 13715488 | B739_0948 | -2.0582 | 7.91E-18 | ABC transporter involved in cytochrome c biogenesis permease |
| 13715489 | B739_0949 | -1.1374 | 5.15E-13 | flavoprotein |
| 13715504 | B739_0964 | -2.7053 | 2.25E-27 | hypothetical protein |
| 13715550 | B739_1011 | -1.6084 | 4.09E-17 | hypothetical protein |
| 13715551 | B739_1012 | -1.1952 | 2.59E-09 | hypothetical protein |
| 13715552 | B739_1013 | -1.018 | 7.33E-06 | hypothetical protein |
| 13715554 | B739_1015 | -1.3212 | 3.27E-12 | D-alanine export protein |
| 13715555 | B739_1016 | -1.6913 | 5.17E-09 | hypothetical protein |
| 13715556 | B739_1017 | -1.7258 | 5.48E-12 | hypothetical protein |
| 13715560 | B739_1021 | -1.2135 | 3.35E-28 | sulfate permease |
| 13715576 | B739_1037 | -1.669 | 1.38E-07 | hypothetical protein |
| 13715580 | B739_1041 | -4.7584 | 2.27E-09 | hypothetical protein |
| 13715583 | B739_1044 | -2.1228 | 3.84E-14 | hypothetical protein |
| 13715584 | B739_1045 | -2.0307 | 1.46E-32 | hypothetical protein |
| 13715588 | B739_1049 | -1.3234 | 1.20E-11 | hypothetical protein |
| 13715596 | B739_1057 | -1.3895 | 9.44E-14 | hypothetical protein |
| 13715624 | B739_1086 | -1.0298 | 6.17E-05 | hypothetical protein |
| 13715625 | B739_1087 | -1.6038 | 0.0032817 | hypothetical protein |
| 13715632 | B739_1095 | -1.6967 | 1.75E-20 | hypothetical protein |
| 13715636 | B739_1099 | -1.2696 | 3.50E-11 | nucleotidyltransferase/DNA polymerase |
| 13715646 | B739_1109 | -2.3241 | 2.79E-09 | hypothetical protein |
| 13715647 | B739_1110 | -2.7241 | 2.40E-20 | hypothetical protein |
| 13715654 | B739_1117 | -1.1095 | 2.74E-05 | intracellular protease/amidase |
| 13715672 | B739_1135 | -1.0991 | 8.89E-06 | Acetyltransferase (isoleucine patch superfamily) |
| 13715674 | B739_1137 | -1.3933 | 1.03E-07 | hypothetical protein |

| | | | | |
|----------|-----------|---------|------------|--|
| 13715684 | B739_1147 | -1.787 | 8.23E-09 | hypothetical protein |
| 13715705 | B739_1168 | -1.2944 | 8.80E-06 | DnaJ-class molecular chaperone with C-terminal Zn finger domain |
| 13715714 | B739_1177 | -1.6766 | 9.81E-18 | hypothetical protein |
| 13715729 | B739_1192 | -1.7563 | 2.13E-11 | hypothetical protein |
| 13715761 | B739_1224 | -2.2439 | 1.11E-11 | hypothetical protein |
| 13715762 | B739_1225 | -1.5609 | 5.62E-22 | hypothetical protein |
| 13715763 | B739_1226 | -2.01 | 0.0014052 | hypothetical protein |
| 13715764 | B739_1227 | -1.5237 | 0.00073354 | hypothetical protein |
| 13715766 | B739_1229 | -2.3307 | 2.78E-05 | hypothetical protein |
| 13715799 | B739_1262 | -1.4493 | 0.010119 | hypothetical protein |
| 13715803 | B739_1266 | -1.3794 | 8.30E-22 | hypothetical protein |
| 13715804 | B739_1267 | -2.6128 | 0.00040716 | hypothetical protein |
| 13715807 | B739_1270 | -3.9347 | 0.0003978 | hypothetical protein |
| 13715808 | B739_1271 | -2.6256 | 4.83E-07 | hypothetical protein |
| 13715814 | B739_1277 | -2.6192 | 0.0015104 | hypothetical protein |
| 13715815 | B739_1278 | -3.351 | 1.97E-24 | hypothetical protein |
| 13715819 | B739_1282 | -3.7597 | 0.0026423 | hypothetical protein |
| 13715821 | B739_1284 | -2.1335 | 3.05E-06 | hypothetical protein |
| 13715822 | B739_1285 | -2.9313 | 1.09E-35 | hypothetical protein |
| 13715823 | B739_1286 | -1.894 | 1.95E-06 | hypothetical protein |
| 13715824 | B739_1287 | -1.8411 | 0.011071 | hypothetical protein |
| 13715825 | B739_1288 | -2.0381 | 0.0040908 | hypothetical protein |
| 13715827 | B739_1290 | -1.9899 | 0.0089049 | hypothetical protein |
| 13715828 | B739_1291 | -2.1669 | 0.0012845 | hypothetical protein |
| 13715829 | B739_1292 | -2.8506 | 1.10E-22 | hypothetical protein |
| 13715835 | B739_1298 | -1.0132 | 0.0096976 | hypothetical protein |
| 13715839 | B739_1302 | -2.668 | 9.29E-21 | hypothetical protein |
| 13715841 | B739_1304 | -1.9679 | 0.00030863 | hypothetical protein |
| 13715842 | B739_1305 | -2.4695 | 1.38E-11 | hypothetical protein |
| 13715843 | B739_1306 | -1.8823 | 0.01061 | hypothetical protein |
| 13715844 | B739_1307 | -2.9016 | 1.36E-09 | hypothetical protein |
| 13715845 | B739_1308 | -2.6788 | 1.06E-05 | hypothetical protein |
| 13715847 | B739_1310 | -3.1274 | 0.002277 | hypothetical protein |
| 13715848 | B739_1311 | -2.4733 | 3.15E-45 | hypothetical protein |
| 13715849 | B739_1312 | -3.4338 | 8.63E-94 | hypothetical protein |
| 13715850 | B739_1313 | -3.1626 | 6.01E-23 | hypothetical protein |
| 13715851 | B739_1314 | -2.3107 | 9.82E-22 | hypothetical protein |
| 13715869 | B739_1332 | -1.6531 | 3.25E-35 | hypothetical protein |
| 13715870 | B739_1333 | -1.2401 | 2.58E-10 | hypothetical protein |
| 13715872 | B739_1335 | -2.2125 | 0.00010926 | hypothetical protein |

| | | | | |
|----------|-----------|---------|------------|---|
| 13715873 | B739_1336 | -1.0387 | 4.57E-05 | hypothetical protein |
| 13715880 | B739_1343 | -1.1098 | 1.45E-12 | hypothetical protein |
| 13715883 | B739_1346 | -3.562 | 7.66E-07 | recombinase A |
| 13715885 | B739_1348 | -2.5948 | 2.94E-30 | hypothetical protein |
| 13715890 | B739_1353 | -3.3628 | 1.88E-20 | hypothetical protein |
| 13715891 | B739_1354 | -3.2996 | 6.06E-20 | hypothetical protein |
| 13715892 | B739_1355 | -3.7338 | 9.90E-17 | hypothetical protein |
| 13715894 | B739_1357 | -1.329 | 5.56E-05 | hypothetical protein |
| 13715899 | B739_1362 | -2.7053 | 1.35E-06 | hypothetical protein |
| 13715900 | B739_1363 | -3.1678 | 1.17E-06 | hypothetical protein |
| 13715901 | B739_1364 | -2.7344 | 1.19E-11 | hypothetical protein |
| 13715903 | B739_1366 | -3.5722 | 0.0001959 | hypothetical protein |
| 13715904 | B739_1367 | -3.6922 | 5.98E-06 | hypothetical protein |
| 13715905 | B739_1368 | -3.2567 | 0.0022636 | hypothetical protein |
| 13715906 | B739_1369 | -2.1274 | 1.26E-05 | hypothetical protein |
| 13715907 | B739_1370 | -2.6364 | 0.0039116 | hypothetical protein |
| 13715908 | B739_1371 | -3.0816 | 0.0048619 | hypothetical protein |
| 13715911 | B739_1374 | -3.0951 | 1.95E-83 | hypothetical protein |
| 13715914 | B739_1377 | -2.6405 | 8.55E-05 | hypothetical protein |
| 13715915 | B739_1378 | -3.4779 | 6.74E-11 | hypothetical protein |
| 13715916 | B739_1379 | -3.1461 | 2.63E-52 | hypothetical protein |
| 13715919 | B739_1382 | -2.802 | 9.16E-06 | hypothetical protein |
| 13715920 | B739_1383 | -3.2914 | 1.21E-08 | hypothetical protein |
| 13715930 | B739_1393 | -1.0897 | 0.00031744 | D-Tyr-tRNA ^{tyr} deacylase |
| 13715931 | B739_1394 | -1.137 | 4.53E-24 | Periplasmic serine proteases (ClpP class) |
| 13715958 | B739_1421 | -1.6644 | 0.0012459 | hypothetical protein |
| 13715960 | B739_1423 | -3.1497 | 4.78E-07 | hypothetical protein |
| 13715974 | B739_1437 | -1.51 | 2.74E-05 | hypothetical protein |
| 13715975 | B739_1438 | -2.0672 | 2.54E-09 | hypothetical protein |
| 13715978 | B739_1441 | -1.793 | 0.00017615 | hypothetical protein |
| 13715980 | B739_1443 | -2.5703 | 1.22E-05 | hypothetical protein |
| 13716001 | B739_1468 | -2.7554 | 0.0048132 | hypothetical protein |
| 13716002 | B739_1469 | -3.8532 | 4.64E-07 | hypothetical protein |
| 13716020 | B739_1488 | -1.0669 | 7.60E-05 | Dihydropteroate synthase-related enzyme |
| 13716037 | B739_1505 | -1.8344 | 4.44E-08 | hypothetical protein |
| 13716048 | B739_1010 | -2.1274 | 0.0055268 | hypothetical protein |
| 13716060 | B739_1529 | -2.2598 | 1.99E-17 | hypothetical protein |
| 13716062 | B739_1531 | -1.8119 | 0.0083288 | hypothetical protein |
| 13716093 | B739_1562 | -1.3651 | 6.55E-68 | Superfamily II DNA and RNA helicase |
| 13716094 | B739_1563 | -1.5602 | 7.86E-17 | Cold shock protein |
| 13716095 | B739_1564 | -4.2436 | 0 | Cold shock protein |

| | | | | |
|----------|-----------|---------|------------|--|
| 13716101 | B739_1570 | -1.0399 | 0.00062784 | hypothetical protein |
| 13716104 | B739_1573 | -1.8452 | 1.44E-14 | hypothetical protein |
| 13716113 | B739_1582 | -2.5246 | 1.04E-13 | molybdopterin and thiamine biosynthesis family protein |
| 13716114 | B739_1583 | -2.7305 | 8.56E-14 | thiamine biosynthesis enzyme ThiH-related protein |
| 13716115 | B739_1584 | -2.4116 | 2.20E-08 | enzyme of thiazole biosynthesis |
| 13716116 | B739_1585 | -2.5263 | 2.68E-09 | hypothetical protein |
| 13716118 | B739_1587 | -1.5775 | 0.00033613 | hypothetical protein |
| 13716119 | B739_1588 | -1.7398 | 2.99E-22 | Thiamine biosynthesis protein ThiC |
| 13716129 | -/- | -1.4789 | 0.0025438 | |
| 13716147 | B739_1616 | -1.3843 | 6.09E-05 | hypothetical protein |
| 13716163 | B739_1632 | -2.8337 | 0.00011709 | hypothetical protein |
| 13716167 | B739_1636 | -2.8416 | 1.04E-23 | hypothetical protein |
| 13716168 | B739_1637 | -2.663 | 2.47E-17 | hypothetical protein |
| 13716170 | B739_1639 | -3.0479 | 4.34E-31 | hypothetical protein |
| 13716171 | B739_1640 | -2.0194 | 4.24E-05 | hypothetical protein |
| 13716181 | B739_1650 | -2.5628 | 0.00030303 | hypothetical protein |
| 13716182 | B739_1651 | -2.036 | 1.49E-05 | hypothetical protein |
| 13716184 | B739_1653 | -2.9953 | 0.0025074 | hypothetical protein |
| 13716187 | B739_1657 | -2.4452 | 1.41E-09 | hypothetical protein |
| 13716188 | B739_1658 | -2.3057 | 0.0034741 | hypothetical protein |
| 13716189 | B739_1659 | -2.578 | 2.11E-05 | hypothetical protein |
| 13716190 | B739_1660 | -2.9854 | 4.35E-15 | hypothetical protein |
| 13716191 | B739_1661 | -2.4493 | 0.00038082 | hypothetical protein |
| 13716192 | B739_1662 | -3.5093 | 9.82E-23 | hypothetical protein |
| 13716193 | B739_1663 | -2.8676 | 2.50E-05 | hypothetical protein |
| 13716194 | B739_1664 | -2.7865 | 2.27E-11 | DNA modification methylase |
| 13716195 | B739_1665 | -2.9782 | 0.00038934 | hypothetical protein |
| 13716198 | B739_1668 | -2.2703 | 5.27E-06 | hypothetical protein |
| 13716199 | B739_1669 | -1.4856 | 0.0031414 | hypothetical protein |
| 13716200 | B739_1670 | -2.6093 | 2.14E-05 | hypothetical protein |
| 13716201 | B739_1671 | -3.36 | 5.84E-10 | hypothetical protein |
| 13716209 | B739_1679 | -2.1873 | 2.11E-20 | hypothetical protein |
| 13716225 | B739_1695 | -1.2877 | 4.67E-07 | hypothetical protein |
| 13716280 | B739_1757 | -2.6658 | 1.40E-07 | ssDNA-binding protein |
| 13716291 | B739_1768 | -2.5748 | 0.010149 | hypothetical protein |
| 13716305 | B739_1782 | -1.1631 | 3.12E-23 | hypothetical protein |
| 13716306 | B739_1783 | -1.1149 | 2.35E-19 | hypothetical protein |
| 13716307 | B739_1784 | -1.1053 | 7.82E-21 | hypothetical protein |
| 13716308 | B739_1785 | -1.6252 | 2.62E-123 | silver efflux pump |

| | | | | |
|----------|-----------|---------|------------|---|
| 13716316 | B739_1793 | -1.5134 | 3.02E-06 | hypothetical protein |
| 13716317 | B739_1794 | -2.5623 | 1.53E-08 | hypothetical protein |
| 13716318 | B739_1795 | -2.48 | 8.70E-24 | membrane-bound metal-dependent hydrolase |
| 13716319 | B739_1796 | -3.773 | 2.85E-27 | hypothetical protein |
| 13716320 | B739_1797 | -3.6579 | 0.00011165 | hypothetical protein |
| 13716321 | B739_1798 | -3.6509 | 4.89E-05 | hypothetical protein |
| 13716322 | B739_1799 | -3.0816 | 2.21E-16 | hypothetical protein |
| 13716336 | B739_1813 | -1.1215 | 0.001017 | hypothetical protein |
| 13716341 | B739_1818 | -1.2176 | 0.010983 | hypothetical protein |
| 13716352 | B739_1829 | -1.3284 | 4.31E-18 | hypothetical protein |
| 13716359 | B739_1836 | -3.6128 | 1.61E-08 | protocatechuate 3,4-dioxygenase subunit beta |
| 13716380 | B739_1857 | -1.1941 | 0.0064467 | hypothetical protein |
| 13716382 | B739_1859 | -1.2603 | 0.011539 | hypothetical protein |
| 13716394 | B739_1871 | -1.7265 | 3.96E-13 | hypothetical protein |
| 13716412 | B739_1890 | -1.2994 | 5.90E-39 | hypothetical protein |
| 13716413 | B739_1891 | -1.2575 | 7.93E-10 | hypothetical protein |
| 13716427 | B739_1905 | -1.341 | 0.00054007 | hypothetical protein |
| 13716479 | B739_1958 | -2.9575 | 3.04E-10 | hypothetical protein |
| 13716480 | B739_1959 | -3.2359 | 0.0024902 | hypothetical protein |
| 13716482 | B739_1961 | -3.0135 | 3.37E-07 | hypothetical protein |
| 13716483 | B739_1962 | -3.4304 | 3.23E-22 | hypothetical protein |
| 13716484 | B739_1963 | -3.3073 | 9.96E-06 | hypothetical protein |
| 13716485 | B739_1964 | -3.6645 | 1.53E-70 | hypothetical protein |
| 13716487 | B739_1966 | -2.905 | 0.00061683 | hypothetical protein |
| 13716488 | B739_1967 | -2.8823 | 1.67E-06 | hypothetical protein |
| 13716489 | B739_1968 | -3.982 | 1.14E-08 | hypothetical protein |
| 13716490 | B739_1969 | -2.6098 | 0.0011365 | hypothetical protein |
| 13716491 | B739_1970 | -3.1529 | 0.006464 | hypothetical protein |
| 13716492 | B739_1971 | -3.9347 | 1.44E-05 | Negative regulator of beta-lactamase expression |
| 13716493 | B739_1972 | -3.3753 | 8.35E-12 | hypothetical protein |
| 13716494 | B739_1973 | -3.73 | 5.20E-12 | hypothetical protein |
| 13716495 | B739_1974 | -3.1014 | 0.0078436 | hypothetical protein |
| 13716496 | B739_1975 | -2.7998 | 0.0005084 | hypothetical protein |
| 13716497 | B739_1976 | -3.756 | 1.28E-16 | hypothetical protein |
| 13716498 | B739_1977 | -3.3577 | 4.63E-05 | hypothetical protein |
| 13716499 | B739_1978 | -3.6312 | 2.27E-24 | hypothetical protein |
| 13716500 | B739_1979 | -2.9027 | 4.35E-11 | hypothetical protein |
| 13716501 | B739_1980 | -2.615 | 0.00014724 | hypothetical protein |
| 13716502 | B739_1981 | -2.5243 | 3.56E-05 | hypothetical protein |
| 13716505 | B739_1984 | -3.4128 | 3.63E-06 | hypothetical protein |
| 13716507 | B739_1986 | -2.5099 | 0.0050666 | hypothetical protein |

| | | | | |
|----------|-----------|---------|------------|--|
| 13716510 | B739_1989 | -3.1542 | 4.11E-06 | hypothetical protein |
| 13716511 | B739_1990 | -2.9129 | 6.22E-05 | hypothetical protein |
| 13716515 | B739_1994 | -3.7322 | 7.44E-11 | hypothetical protein |
| 13716516 | B739_1995 | -3.043 | 1.95E-08 | hypothetical protein |
| 13716517 | B739_1996 | -3.5295 | 5.75E-29 | hypothetical protein |
| 13716519 | B739_1998 | -3.8823 | 0.00052834 | hypothetical protein |
| 13716520 | B739_1999 | -3.6142 | 3.59E-08 | prophage antirepressor |
| 13716523 | B739_2002 | -2.7356 | 7.08E-08 | hypothetical protein |
| 13716525 | B739_2004 | -1.9288 | 0.0014865 | hypothetical protein |
| 13716576 | B739_2055 | -1.644 | 1.48E-12 | hypothetical protein |
| 13716580 | B739_2059 | -2.2006 | 0.0019689 | hypothetical protein |
| 13716664 | B739_2143 | -1.0556 | 0.0011685 | hypothetical protein |
| 13716688 | B739_0196 | -2.6705 | 1.45E-06 | hypothetical protein |
| 13716689 | B739_0197 | -1.0527 | 5.49E-05 | hypothetical protein |
| 13716692 | B739_0200 | -1.5252 | 1.81E-46 | hypothetical protein |
| 13716696 | B739_0204 | -1.1612 | 1.23E-07 | hypothetical protein |
| 13716698 | B739_0207 | -2.6881 | 0.00023828 | hypothetical protein |
| 13716702 | B739_0211 | -3.6192 | 1.47E-08 | hypothetical protein |
| 13716705 | B739_0214 | -1.5777 | 3.62E-10 | Signal transduction histidine kinase |
| 13716707 | B739_0216 | -2.7848 | 1.46E-19 | hypothetical protein |
| 13716708 | B739_0217 | -2.8564 | 7.40E-24 | hypothetical protein |
| 13716736 | B739_0245 | -1.1335 | 3.69E-06 | hypothetical protein |
| 13716737 | B739_0246 | -1.3404 | 0.0037566 | hypothetical protein |
| 13716761 | B739_0270 | -1.1904 | 1.62E-50 | hypothetical protein |
| 13716762 | B739_0271 | -3.4062 | 1.94E-06 | hypothetical protein |
| 13716764 | B739_0274 | -2.0411 | 1.67E-05 | hypothetical protein |
| 13716766 | B739_0275 | -2.8628 | 7.94E-10 | hypothetical protein |
| 13716767 | B739_0276 | -3.7299 | 1.33E-30 | hypothetical protein |
| 13716768 | B739_0277 | -2.1189 | 9.35E-12 | Membrane protein related to metalloendopeptidase |
| 13716769 | B739_0278 | -1.112 | 1.19E-18 | hypothetical protein |
| 13716770 | B739_0279 | -4.1004 | 9.41E-16 | hypothetical protein |
| 13716771 | B739_0280 | -1.4493 | 4.78E-05 | hypothetical protein |
| 13716774 | B739_0283 | -1.8959 | 1.07E-06 | hypothetical protein |
| 13716811 | B739_0321 | -2.5368 | 0.0023722 | hypothetical protein |
| 13716819 | B739_0329 | -1.4034 | 7.18E-21 | hypothetical protein |
| 13716843 | B739_0355 | -1.9249 | 3.81E-12 | hypothetical protein |
| 13716877 | B739_0389 | -2.298 | 2.32E-25 | hypothetical protein |
| 13716878 | B739_0390 | -1.5627 | 1.98E-09 | hypothetical protein |
| 13716888 | B739_0400 | -1.1837 | 2.37E-06 | hypothetical protein |
| 13716894 | B739_0406 | -1.6047 | 3.21E-32 | hypothetical protein |
| 13716942 | B739_0454 | -1.0246 | 0.00056591 | site-specific recombinase XerD |

| | | | | |
|----------|-----------|---------|------------|--|
| 13716943 | B739_0455 | -1.2138 | 0.0037585 | hypothetical protein |
| 13716948 | B739_0460 | -1.3951 | 9.00E-12 | hypothetical protein |
| 13716951 | B739_0463 | -1.0926 | 0.0029649 | hypothetical protein |
| 13716959 | B739_0471 | -1.1398 | 4.34E-06 | hypothetical protein |
| 13716972 | B739_0484 | -1.5077 | 5.54E-06 | hypothetical protein |
| 13716973 | B739_0485 | -1.6632 | 1.52E-09 | hypothetical protein |
| 13716975 | B739_0487 | -1.6252 | 1.24E-22 | hypothetical protein |
| 13716976 | B739_0488 | -1.4465 | 8.62E-05 | hypothetical protein |
| 13716977 | B739_0489 | -3.0534 | 0.00014169 | hypothetical protein |
| 13716982 | B739_0494 | -1.4308 | 1.58E-07 | Histone acetyltransferase HPA2-related acetyltransferase |
| 13716993 | B739_0505 | -1.5253 | 5.71E-18 | hypothetical protein |
| 13716994 | B739_0506 | -1.3384 | 1.05E-12 | hypothetical protein |
| 13717004 | B739_0516 | -1.5868 | 5.87E-07 | hypothetical protein |
| 13717009 | B739_0521 | -1.626 | 4.24E-07 | hypothetical protein |
| 13717026 | B739_0538 | -3.0181 | 5.28E-37 | hypothetical protein |
| 13717027 | B739_0539 | -3.4169 | 0.00050172 | hypothetical protein |
| 13717043 | B739_0555 | -1.2931 | 0.00022915 | hypothetical protein |
| 13717050 | B739_0562 | -1.0826 | 8.13E-16 | hypothetical protein |
| 13717079 | -//- | -2.1274 | 0.010205 | |
| 13717084 | B739_0596 | -1.9018 | 1.72E-08 | hypothetical protein |
| 13717090 | B739_0602 | -1.5164 | 1.29E-07 | Rhodanese-related sulfurtransferase |
| 13717104 | B739_0616 | -1.1874 | 9.81E-05 | response regulator containing CheY-like receiver and SARP domains |
| 13717105 | B739_0617 | -1.3984 | 4.89E-06 | hypothetical protein |
| 13717106 | B739_0618 | -1.0044 | 0.00093961 | hypothetical protein |
| 13717121 | B739_0633 | -2.1753 | 0.0001524 | hypothetical protein |
| 13717122 | B739_0634 | -1.3709 | 0.00065609 | hypothetical protein |
| 13717124 | B739_0636 | -1.6516 | 8.19E-65 | hypothetical protein |
| 13717133 | B739_0645 | -1.1337 | 5.62E-06 | hypothetical protein |
| 13717141 | B739_0653 | -2.6141 | 1.26E-18 | hypothetical protein |
| 13717160 | B739_0672 | -1.6689 | 6.45E-100 | hypothetical protein |
| 13717179 | B739_0691 | -1.7423 | 2.94E-10 | hypothetical protein |
| 13717189 | B739_0702 | -1.656 | 1.52E-13 | hypothetical protein |
| 13717190 | B739_0703 | -1.3893 | 5.17E-08 | hypothetical protein |
| 13717196 | B739_0710 | -1.8055 | 4.09E-12 | hypothetical protein |
| 13717201 | B739_0715 | -1.7264 | 0.0059863 | hypothetical protein |
| 13717202 | B739_0716 | -1.9954 | 9.07E-13 | hypothetical protein |
| 13717212 | B739_0726 | -1.5349 | 5.60E-06 | hypothetical protein |
| 13717213 | B739_0727 | -2.3046 | 2.65E-12 | Zn-dependent hydrolase, including glyoxylase |
| 13717221 | B739_0735 | -2.9087 | 0.0095116 | hypothetical protein |

| | | | | |
|----------|-----------|---------|-----------|------------------------------|
| 13717253 | B739_0767 | -2.0287 | 2.41E-21 | hypothetical protein |
| 13717254 | B739_0768 | -1.0074 | 3.83E-10 | hypothetical protein |
| 13717255 | B739_0769 | -2.7152 | 3.21E-14 | hypothetical protein |
| 13717263 | B739_0777 | -1.2289 | 0.0014001 | hypothetical protein |
| 13717266 | B739_0780 | -1.6812 | 1.81E-34 | hypothetical protein |
| 13717267 | B739_0781 | -1.7733 | 3.37E-264 | Cation/multidrug efflux pump |
| 13717268 | B739_0782 | -1.5725 | 3.33E-32 | hypothetical protein |
| 13717278 | B739_0792 | -1.1293 | 2.91E-23 | aminopeptidase |
| 13717288 | B739_0802 | -1.3634 | 1.32E-07 | cytosine/adenosine deaminase |
| 13717293 | B739_0807 | -1.1611 | 3.35E-19 | hypothetical protein |
| 13717302 | B739_0817 | -4.0581 | 0.0023634 | hypothetical protein |
| 13717303 | B739_0818 | -2.8375 | 3.26E-21 | hypothetical protein |
| 13717304 | B739_0819 | -2.6211 | 2.06E-20 | hypothetical protein |
| 13717305 | B739_0820 | -2.4038 | 7.07E-08 | hypothetical protein |
| 13717324 | B739_0839 | -1.0726 | 1.19E-09 | acyltransferase |
