

| ORF         | Rank3                                       | Log2Fold<br>Change | Base<br>Mean | lfcSE | padj    |
|-------------|---------------------------------------------|--------------------|--------------|-------|---------|
| k99_1439363 | Acetylornithineaminotransferase(EC2.6.1.11) | 7.1                | 14           | 1.75  | 9.4E-04 |
| k99_59111   | Acetylornithineaminotransferase(EC2.6.1.11) | 6.4                | 538          | 1.14  | 1.4E-06 |
| k99_123544  | Acetylornithineaminotransferase(EC2.6.1.11) | -4.4               | 256          | 0.55  | 7.9E-13 |
| k99_86782   | Acetylornithineaminotransferase(EC2.6.1.11) | -4.6               | 91           | 1.04  | 2.7E-04 |
| k99_758926  | Acetylornithineaminotransferase(EC2.6.1.11) | -4.8               | 84           | 0.99  | 4.5E-05 |
| k99_1583409 | Acetylornithineaminotransferase(EC2.6.1.11) | -5.9               | 16           | 1.55  | 2.1E-03 |
| k99_1414684 | Acetylornithineaminotransferase(EC2.6.1.11) | -7.1               | 10           | 1.96  | 3.8E-03 |
| k99_721690  | Acetylornithineaminotransferase(EC2.6.1.11) | -7.3               | 11           | 1.88  | 1.7E-03 |
| k99_239926  | Acetylornithineaminotransferase(EC2.6.1.11) | -7.4               | 12           | 1.84  | 1.1E-03 |
| k99_1065740 | Acetylornithineaminotransferase(EC2.6.1.11) | -7.8               | 17           | 1.69  | 1.1E-04 |
| k99_336741  | Alkalinephosphatase(EC3.1.3.1)              | 3.3                | 276          | 0.52  | 2.4E-08 |
| k99_1248131 | Alkalinephosphatase(EC3.1.3.1)              | 3.0                | 150          | 0.82  | 3.2E-03 |
| k99_18984   | Alkalinephosphatase(EC3.1.3.1)              | 2.8                | 95           | 0.80  | 5.4E-03 |
| k99_773758  | Alkalinephosphatase(EC3.1.3.1)              | 2.7                | 76           | 0.71  | 1.8E-03 |
| k99_679668  | Alkalinephosphatase(EC3.1.3.1)              | 2.5                | 179          | 0.77  | 9.0E-03 |
| k99_671270  | Alkalinephosphatase(EC3.1.3.1)              | 2.4                | 927          | 0.56  | 3.2E-04 |
| k99_328597  | Alkalinephosphatase(EC3.1.3.1)              | 2.4                | 102          | 0.69  | 4.7E-03 |
| k99_50299   | Alkalinephosphatase(EC3.1.3.1)              | 2.4                | 207          | 0.63  | 2.1E-03 |
| k99_150237  | Alkalinephosphatase(EC3.1.3.1)              | 2.3                | 2376         | 0.55  | 5.7E-04 |
| k99_950901  | Alkalinephosphatase(EC3.1.3.1)              | 2.0                | 177          | 0.60  | 6.6E-03 |
| k99_122894  | Alkalinephosphatase(EC3.1.3.1)              | 1.9                | 427          | 0.58  | 9.1E-03 |
| k99_1250080 | Alkalinephosphatase(EC3.1.3.1)              | -3.0               | 123          | 0.66  | 2.0E-04 |
| k99_706111  | Alkalinephosphatase(EC3.1.3.1)              | -3.3               | 946          | 0.87  | 2.2E-03 |
| k99_503548  | Alkalinephosphatase(EC3.1.3.1)              | -3.6               | 38           | 1.08  | 7.0E-03 |
| k99_1659835 | Alkalinephosphatase(EC3.1.3.1)              | -3.7               | 26           | 1.03  | 3.9E-03 |
| k99_969072  | Alkalinephosphatase(EC3.1.3.1)              | -3.8               | 21           | 0.99  | 2.1E-03 |
| k99_1623293 | Alkalinephosphatase(EC3.1.3.1)              | -3.9               | 180          | 0.76  | 1.1E-05 |
| k99_531437  | Alkalinephosphatase(EC3.1.3.1)              | -6.8               | 8            | 1.96  | 5.5E-03 |
| k99_228100  | Alkalinephosphatase(EC3.1.3.1)              | -6.8               | 8            | 1.95  | 5.0E-03 |
| k99_1190603 | Alkalinephosphatase(EC3.1.3.1)              | -6.9               | 9            | 1.94  | 4.4E-03 |
| k99_965201  | Alkalinephosphatase(EC3.1.3.1)              | -7.0               | 9            | 2.01  | 5.9E-03 |
| k99_257505  | Alkalinephosphatase(EC3.1.3.1)              | -7.1               | 10           | 1.94  | 3.2E-03 |
| k99_1414492 | Alkalinephosphatase(EC3.1.3.1)              | -7.1               | 10           | 1.83  | 1.6E-03 |
| k99_1005394 | Alkalinephosphatase(EC3.1.3.1)              | -7.4               | 12           | 1.80  | 7.9E-04 |
| k99_1215476 | Alkalinephosphatase(EC3.1.3.1)              | -7.5               | 14           | 1.75  | 3.7E-04 |
| k99_1314916 | Alkalinephosphatase(EC3.1.3.1)              | -8.0               | 131          | 1.04  | 7.6E-12 |
| k99_606556  | Allantoicase(EC3.5.3.4)                     | 2.4                | 337          | 0.73  | 8.4E-03 |
| k99_522161  | ammonium/methylammoniumpermease             | -2.6               | 83           | 0.61  | 4.0E-04 |
| k99_886010  | Ammoniumtransporter                         | 7.0                | 14           | 1.80  | 1.6E-03 |
| k99_333689  | Ammoniumtransporter                         | 6.8                | 12           | 1.77  | 1.6E-03 |
| k99_109476  | Ammoniumtransporter                         | 6.7                | 11           | 1.82  | 2.9E-03 |
| k99_252804  | Ammoniumtransporter                         | 6.7                | 11           | 1.82  | 3.2E-03 |
| k99_1023944 | Ammoniumtransporter                         | 6.6                | 10           | 1.86  | 4.6E-03 |
| k99_1701981 | Ammoniumtransporter                         | 4.8                | 34           | 1.21  | 1.0E-03 |
| k99_1159488 | Ammoniumtransporter                         | 4.2                | 29           | 0.99  | 5.0E-04 |
| k99_517217  | Ammoniumtransporter                         | 3.5                | 49           | 0.89  | 1.4E-03 |
| k99_193141  | Ammoniumtransporter                         | 3.0                | 149          | 0.70  | 4.2E-04 |
| k99_453146  | Ammoniumtransporter                         | 2.4                | 62           | 0.67  | 5.1E-03 |
| k99_1323406 | Ammoniumtransporter                         | 2.3                | 183          | 0.67  | 5.4E-03 |
| k99_848038  | Ammoniumtransporter                         | 2.0                | 176          | 0.62  | 9.7E-03 |
| k99_47800   | Ammoniumtransporter                         | -1.9               | 237          | 0.56  | 6.3E-03 |
| k99_1363849 | Ammoniumtransporter                         | -2.1               | 383          | 0.60  | 4.0E-03 |
| k99_832956  | Ammoniumtransporter                         | -2.3               | 87           | 0.65  | 4.7E-03 |
| k99_1370945 | Ammoniumtransporter                         | -2.5               | 182          | 0.67  | 2.8E-03 |

|             |                     |      |     |      |         |
|-------------|---------------------|------|-----|------|---------|
| k99_1270947 | Ammoniumtransporter | -2.6 | 171 | 0.61 | 3.6E-04 |
| k99_565404  | Ammoniumtransporter | -2.7 | 151 | 0.64 | 4.2E-04 |
| k99_822656  | Ammoniumtransporter | -3.6 | 61  | 0.79 | 1.9E-04 |
| k99_361558  | Ammoniumtransporter | -3.6 | 48  | 0.76 | 6.9E-05 |
| k99_1693269 | Ammoniumtransporter | -3.8 | 47  | 1.04 | 2.8E-03 |
| k99_648829  | Ammoniumtransporter | -3.9 | 33  | 1.13 | 6.0E-03 |
| k99_1075778 | Ammoniumtransporter | -4.0 | 20  | 1.19 | 8.4E-03 |
| k99_713618  | Ammoniumtransporter | -4.0 | 94  | 0.74 | 3.7E-06 |
| k99_1407249 | Ammoniumtransporter | -4.3 | 39  | 1.04 | 6.2E-04 |
| k99_671910  | Ammoniumtransporter | -4.3 | 67  | 1.05 | 6.8E-04 |
| k99_1193409 | Ammoniumtransporter | -4.4 | 28  | 1.09 | 1.0E-03 |
| k99_138021  | Ammoniumtransporter | -4.9 | 16  | 1.47 | 8.0E-03 |
| k99_335521  | Ammoniumtransporter | -4.9 | 134 | 0.66 | 2.8E-11 |
| k99_1278671 | Ammoniumtransporter | -5.0 | 17  | 1.50 | 8.0E-03 |
| k99_183415  | Ammoniumtransporter | -5.0 | 95  | 0.94 | 4.7E-06 |
| k99_448348  | Ammoniumtransporter | -5.0 | 19  | 1.45 | 5.6E-03 |
| k99_786296  | Ammoniumtransporter | -5.2 | 40  | 1.05 | 3.3E-05 |
| k99_1461443 | Ammoniumtransporter | -5.3 | 117 | 0.89 | 1.7E-07 |
| k99_646702  | Ammoniumtransporter | -5.5 | 36  | 1.09 | 1.9E-05 |
| k99_232809  | Ammoniumtransporter | -5.7 | 14  | 1.61 | 4.5E-03 |
| k99_191676  | Ammoniumtransporter | -5.9 | 178 | 0.92 | 2.3E-08 |
| k99_607458  | Ammoniumtransporter | -6.2 | 116 | 0.89 | 9.1E-10 |
| k99_208778  | Ammoniumtransporter | -6.4 | 66  | 1.11 | 6.1E-07 |
| k99_268155  | Ammoniumtransporter | -6.7 | 27  | 1.41 | 6.0E-05 |
| k99_428423  | Ammoniumtransporter | -6.7 | 8   | 2.00 | 7.7E-03 |
| k99_733675  | Ammoniumtransporter | -6.8 | 8   | 1.96 | 6.1E-03 |
| k99_68428   | Ammoniumtransporter | -6.8 | 8   | 1.94 | 4.9E-03 |
| k99_1302386 | Ammoniumtransporter | -6.9 | 9   | 1.99 | 5.9E-03 |
| k99_1196546 | Ammoniumtransporter | -6.9 | 9   | 1.91 | 3.8E-03 |
| k99_1107305 | Ammoniumtransporter | -7.0 | 9   | 1.91 | 3.5E-03 |
| k99_27954   | Ammoniumtransporter | -7.0 | 10  | 1.88 | 2.5E-03 |
| k99_718986  | Ammoniumtransporter | -7.1 | 10  | 1.96 | 3.6E-03 |
| k99_869600  | Ammoniumtransporter | -7.1 | 10  | 1.92 | 2.7E-03 |
| k99_1709179 | Ammoniumtransporter | -7.1 | 10  | 2.00 | 4.1E-03 |
| k99_1331831 | Ammoniumtransporter | -7.2 | 11  | 1.82 | 1.3E-03 |
| k99_1043618 | Ammoniumtransporter | -7.2 | 11  | 2.06 | 5.3E-03 |
| k99_641937  | Ammoniumtransporter | -7.3 | 11  | 1.90 | 2.0E-03 |
| k99_133349  | Ammoniumtransporter | -7.3 | 12  | 1.81 | 9.6E-04 |
| k99_178723  | Ammoniumtransporter | -7.3 | 12  | 1.85 | 1.2E-03 |
| k99_443074  | Ammoniumtransporter | -7.6 | 14  | 1.99 | 2.0E-03 |
| k99_1194104 | Ammoniumtransporter | -7.6 | 14  | 1.72 | 2.3E-04 |
| k99_1048266 | Ammoniumtransporter | -7.7 | 15  | 2.00 | 1.9E-03 |
| k99_889584  | Ammoniumtransporter | -7.7 | 54  | 1.30 | 2.9E-07 |
| k99_1267933 | Ammoniumtransporter | -7.7 | 15  | 1.71 | 1.8E-04 |
| k99_277090  | Ammoniumtransporter | -7.8 | 16  | 1.68 | 1.0E-04 |
| k99_1309932 | Ammoniumtransporter | -7.8 | 17  | 1.70 | 1.1E-04 |
| k99_160530  | Ammoniumtransporter | -8.0 | 469 | 0.93 | 8.9E-15 |
| k99_1533443 | Ammoniumtransporter | -8.0 | 19  | 1.72 | 9.5E-05 |
| k99_535067  | Ammoniumtransporter | -8.2 | 22  | 1.70 | 4.6E-05 |
| k99_781761  | Ammoniumtransporter | -8.2 | 22  | 1.65 | 2.5E-05 |
| k99_1517538 | Ammoniumtransporter | -8.3 | 474 | 0.80 | 1.8E-21 |
| k99_201136  | Ammoniumtransporter | -8.3 | 22  | 1.62 | 1.4E-05 |
| k99_1142285 | Ammoniumtransporter | -8.4 | 25  | 1.58 | 5.5E-06 |
| k99_1560186 | Ammoniumtransporter | -8.4 | 26  | 1.54 | 2.3E-06 |
| k99_342506  | Ammoniumtransporter | -8.6 | 28  | 1.56 | 2.4E-06 |

|             |                                                  |       |      |      |         |
|-------------|--------------------------------------------------|-------|------|------|---------|
| k99_1145620 | Ammoniumtransporter                              | -8.6  | 29   | 1.53 | 1.1E-06 |
| k99_749951  | Ammoniumtransporter                              | -8.8  | 33   | 1.52 | 5.3E-07 |
| k99_1002888 | Ammoniumtransporter                              | -9.0  | 38   | 1.58 | 8.3E-07 |
| k99_1433662 | Ammoniumtransporter                              | -9.2  | 44   | 1.51 | 8.6E-08 |
| k99_1429588 | Ammoniumtransporter                              | -9.8  | 68   | 1.45 | 2.0E-09 |
| k99_740589  | Ammoniumtransporter                              | -9.8  | 68   | 1.41 | 6.0E-10 |
| k99_1391239 | Ammoniumtransporter                              | -10.2 | 89   | 1.38 | 3.1E-11 |
| k99_491968  | Ammoniumtransporter                              | -10.6 | 111  | 1.37 | 5.8E-12 |
| k99_1578186 | Argininosuccinatesynthase(EC6.3.4.5)             | 6.4   | 9    | 1.94 | 8.4E-03 |
| k99_772147  | Argininosuccinatesynthase(EC6.3.4.5)             | 6.4   | 9    | 1.90 | 7.3E-03 |
| k99_353654  | Argininosuccinatesynthase(EC6.3.4.5)             | 4.2   | 58   | 1.21 | 5.9E-03 |
| k99_1423393 | Argininosuccinatesynthase(EC6.3.4.5)             | -3.1  | 107  | 0.72 | 3.2E-04 |
| k99_777233  | Argininosuccinatesynthase(EC6.3.4.5)             | -3.6  | 120  | 0.71 | 1.5E-05 |
| k99_1252191 | Argininosuccinatesynthase(EC6.3.4.5)             | -3.8  | 102  | 0.87 | 3.4E-04 |
| k99_749147  | Argininosuccinatesynthase(EC6.3.4.5)             | -4.0  | 23   | 1.02 | 1.4E-03 |
| k99_701159  | Argininosuccinatesynthase(EC6.3.4.5)             | -4.1  | 33   | 1.16 | 4.5E-03 |
| k99_1429234 | Argininosuccinatesynthase(EC6.3.4.5)             | -4.1  | 17   | 1.25 | 8.9E-03 |
| k99_1263576 | Argininosuccinatesynthase(EC6.3.4.5)             | -4.7  | 275  | 0.79 | 2.7E-07 |
| k99_649173  | Argininosuccinatesynthase(EC6.3.4.5)             | -4.8  | 38   | 1.34 | 4.0E-03 |
| k99_1586492 | Argininosuccinatesynthase(EC6.3.4.5)             | -4.9  | 1060 | 0.65 | 2.3E-11 |
| k99_1429243 | Argininosuccinatesynthase(EC6.3.4.5)             | -5.7  | 27   | 1.35 | 4.5E-04 |
| k99_1483187 | Argininosuccinatesynthase(EC6.3.4.5)             | -5.8  | 15   | 1.66 | 4.9E-03 |
| k99_187987  | Argininosuccinatesynthase(EC6.3.4.5)             | -6.3  | 61   | 1.15 | 2.4E-06 |
| k99_405590  | Argininosuccinatesynthase(EC6.3.4.5)             | -7.2  | 11   | 1.82 | 1.3E-03 |
| k99_19048   | Argininosuccinatesynthase(EC6.3.4.5)             | -7.4  | 12   | 1.88 | 1.4E-03 |
| k99_1308243 | Argininosuccinatesynthase(EC6.3.4.5)             | -7.5  | 13   | 2.27 | 9.3E-03 |
| k99_1203423 | Argininosuccinatesynthase(EC6.3.4.5)             | -8.4  | 25   | 1.56 | 3.4E-06 |
| k99_497601  | Argininosuccinatesynthase(EC6.3.4.5)             | -8.5  | 27   | 1.57 | 3.0E-06 |
| k99_1184154 | Argininosuccinatesynthase(EC6.3.4.5)             | -8.8  | 33   | 1.54 | 6.9E-07 |
| k99_735461  | ATPSynthaseB' chain(EC3.6.3.14)                  | 7.1   | 14   | 1.72 | 7.3E-04 |
| k99_1000853 | ATPSynthaseB' chain(EC3.6.3.14)                  | 6.4   | 9    | 1.94 | 8.9E-03 |
| k99_1414061 | ATPSynthaseB' chain(EC3.6.3.14)                  | -2.1  | 102  | 0.59 | 4.3E-03 |
| k99_653877  | ATPSynthaseB' chain(EC3.6.3.14)                  | -2.8  | 106  | 0.66 | 3.7E-04 |
| k99_1457909 | ATPSynthaseB' chain(EC3.6.3.14)                  | -4.0  | 530  | 0.86 | 9.6E-05 |
| k99_10944   | ATPSynthaseB' chain(EC3.6.3.14)                  | -4.7  | 20   | 1.30 | 3.8E-03 |
| k99_106045  | ATPSynthaseB' chain(EC3.6.3.14)                  | -5.5  | 24   | 1.38 | 1.2E-03 |
| k99_1092489 | ATPSynthaseB' chain(EC3.6.3.14)                  | -6.4  | 23   | 1.51 | 4.0E-04 |
| k99_860105  | ATPSynthaseB' chain(EC3.6.3.14)                  | -6.9  | 9    | 1.93 | 3.8E-03 |
| k99_1334741 | ATPSynthaseB' chain(EC3.6.3.14)                  | -8.8  | 33   | 1.51 | 4.1E-07 |
| k99_1556764 | ATPSynthaseB' chain(EC3.6.3.14)                  | -9.0  | 38   | 1.49 | 1.3E-07 |
| k99_357591  | Branched-chainacyl-CoAdehydrogenase(EC1.3.99.12) | 6.4   | 9    | 1.90 | 7.5E-03 |
| k99_1057993 | Branched-chainacyl-CoAdehydrogenase(EC1.3.99.12) | 4.3   | 24   | 1.24 | 5.3E-03 |
| k99_313883  | Branched-chainacyl-CoAdehydrogenase(EC1.3.99.12) | 2.1   | 422  | 0.59 | 5.4E-03 |
| k99_1061362 | Branched-chainacyl-CoAdehydrogenase(EC1.3.99.12) | -3.9  | 50   | 1.15 | 6.5E-03 |
| k99_1359077 | Branched-chainacyl-CoAdehydrogenase(EC1.3.99.12) | -4.0  | 119  | 0.79 | 1.2E-05 |
| k99_1608370 | Branched-chainacyl-CoAdehydrogenase(EC1.3.99.12) | -4.3  | 247  | 0.70 | 4.7E-08 |
| k99_909596  | Branched-chainacyl-CoAdehydrogenase(EC1.3.99.12) | -4.4  | 92   | 1.17 | 2.0E-03 |
| k99_689220  | Branched-chainacyl-CoAdehydrogenase(EC1.3.99.12) | -4.6  | 199  | 1.06 | 3.0E-04 |
| k99_1613990 | Branched-chainacyl-CoAdehydrogenase(EC1.3.99.12) | -4.7  | 29   | 1.07 | 2.8E-04 |
| k99_733722  | Branched-chainacyl-CoAdehydrogenase(EC1.3.99.12) | -5.7  | 28   | 1.32 | 3.3E-04 |
| k99_413977  | Branched-chainacyl-CoAdehydrogenase(EC1.3.99.12) | -5.8  | 15   | 1.56 | 2.6E-03 |
| k99_157991  | Branched-chainacyl-CoAdehydrogenase(EC1.3.99.12) | -6.0  | 182  | 0.96 | 5.3E-08 |
| k99_1101409 | Branched-chainacyl-CoAdehydrogenase(EC1.3.99.12) | -6.0  | 26   | 1.40 | 3.9E-04 |
| k99_996036  | Branched-chainacyl-CoAdehydrogenase(EC1.3.99.12) | -6.2  | 20   | 1.58 | 1.5E-03 |
| k99_291738  | Branched-chainacyl-CoAdehydrogenase(EC1.3.99.12) | -6.8  | 8    | 1.96 | 5.3E-03 |

|             |                                                     |       |     |      |         |
|-------------|-----------------------------------------------------|-------|-----|------|---------|
| k99_1691559 | Branched-chainacyl-CoAdehydrogenase(EC1.3.99.12)    | -6.9  | 9   | 2.01 | 6.4E-03 |
| k99_344089  | Branched-chainacyl-CoAdehydrogenase(EC1.3.99.12)    | -7.0  | 18  | 1.59 | 2.9E-04 |
| k99_1102237 | Branched-chainacyl-CoAdehydrogenase(EC1.3.99.12)    | -7.0  | 9   | 1.96 | 4.3E-03 |
| k99_1598683 | Branched-chainacyl-CoAdehydrogenase(EC1.3.99.12)    | -7.0  | 10  | 1.87 | 2.5E-03 |
| k99_414542  | Branched-chainacyl-CoAdehydrogenase(EC1.3.99.12)    | -7.1  | 10  | 1.85 | 1.7E-03 |
| k99_4296    | Branched-chainacyl-CoAdehydrogenase(EC1.3.99.12)    | -7.2  | 11  | 1.83 | 1.4E-03 |
| k99_247238  | Branched-chainacyl-CoAdehydrogenase(EC1.3.99.12)    | -7.3  | 11  | 1.84 | 1.3E-03 |
| k99_306025  | Branched-chainacyl-CoAdehydrogenase(EC1.3.99.12)    | -7.3  | 12  | 1.94 | 2.4E-03 |
| k99_559778  | Branched-chainacyl-CoAdehydrogenase(EC1.3.99.12)    | -7.5  | 14  | 1.74 | 3.1E-04 |
| k99_506211  | Branched-chainacyl-CoAdehydrogenase(EC1.3.99.12)    | -7.7  | 16  | 1.70 | 1.5E-04 |
| k99_1308358 | Branched-chainacyl-CoAdehydrogenase(EC1.3.99.12)    | -8.2  | 21  | 1.76 | 9.1E-05 |
| k99_716243  | Branched-chainacyl-CoAdehydrogenase(EC1.3.99.12)    | -8.4  | 26  | 1.58 | 4.2E-06 |
| k99_19944   | Branched-chainacyl-CoAdehydrogenase(EC1.3.99.12)    | -9.0  | 37  | 1.47 | 9.9E-08 |
| k99_15289   | Branched-chainacyl-CoAdehydrogenase(EC1.3.99.12)    | -10.2 | 90  | 1.39 | 4.0E-11 |
| k99_505985  | Branched-chainaminoacidaminotransferase(EC2.6.1.42) | 9.7   | 86  | 1.59 | 1.0E-07 |
| k99_932093  | Branched-chainaminoacidaminotransferase(EC2.6.1.42) | 8.4   | 34  | 1.61 | 8.7E-06 |
| k99_797633  | Branched-chainaminoacidaminotransferase(EC2.6.1.42) | 7.9   | 26  | 1.54 | 1.1E-05 |
| k99_337134  | Branched-chainaminoacidaminotransferase(EC2.6.1.42) | 7.6   | 20  | 1.74 | 2.9E-04 |
| k99_1384823 | Branched-chainaminoacidaminotransferase(EC2.6.1.42) | 7.5   | 20  | 2.31 | 9.6E-03 |
| k99_1056003 | Branched-chainaminoacidaminotransferase(EC2.6.1.42) | 7.4   | 18  | 1.88 | 1.4E-03 |
| k99_11551   | Branched-chainaminoacidaminotransferase(EC2.6.1.42) | 7.4   | 17  | 1.66 | 2.3E-04 |
| k99_607534  | Branched-chainaminoacidaminotransferase(EC2.6.1.42) | 7.0   | 13  | 1.90 | 3.1E-03 |
| k99_848519  | Branched-chainaminoacidaminotransferase(EC2.6.1.42) | 6.7   | 22  | 1.87 | 3.9E-03 |
| k99_924883  | Branched-chainaminoacidaminotransferase(EC2.6.1.42) | 6.6   | 10  | 1.85 | 4.2E-03 |
| k99_526263  | Branched-chainaminoacidaminotransferase(EC2.6.1.42) | 5.9   | 23  | 1.75 | 7.1E-03 |
| k99_794380  | Branched-chainaminoacidaminotransferase(EC2.6.1.42) | 5.7   | 103 | 1.29 | 2.3E-04 |
| k99_828962  | Branched-chainaminoacidaminotransferase(EC2.6.1.42) | 4.9   | 131 | 1.00 | 3.5E-05 |
| k99_274262  | Branched-chainaminoacidaminotransferase(EC2.6.1.42) | 4.6   | 95  | 0.93 | 3.2E-05 |
| k99_1101610 | Branched-chainaminoacidaminotransferase(EC2.6.1.42) | 4.3   | 31  | 1.18 | 3.3E-03 |
| k99_243311  | Branched-chainaminoacidaminotransferase(EC2.6.1.42) | 4.2   | 84  | 1.12 | 2.3E-03 |
| k99_371820  | Branched-chainaminoacidaminotransferase(EC2.6.1.42) | 4.1   | 40  | 1.15 | 4.5E-03 |
| k99_875391  | Branched-chainaminoacidaminotransferase(EC2.6.1.42) | 4.1   | 108 | 0.97 | 5.9E-04 |
| k99_607626  | Branched-chainaminoacidaminotransferase(EC2.6.1.42) | 3.7   | 112 | 0.93 | 1.0E-03 |
| k99_1578035 | Branched-chainaminoacidaminotransferase(EC2.6.1.42) | 2.6   | 140 | 0.69 | 2.1E-03 |
| k99_122179  | Branched-chainaminoacidaminotransferase(EC2.6.1.42) | -2.6  | 149 | 0.64 | 7.3E-04 |
| k99_535178  | Branched-chainaminoacidaminotransferase(EC2.6.1.42) | -2.9  | 60  | 0.84 | 5.4E-03 |
| k99_964002  | Branched-chainaminoacidaminotransferase(EC2.6.1.42) | -3.4  | 163 | 0.68 | 2.0E-05 |
| k99_672415  | Branched-chainaminoacidaminotransferase(EC2.6.1.42) | -4.1  | 32  | 1.23 | 8.4E-03 |
| k99_12851   | Branched-chainaminoacidaminotransferase(EC2.6.1.42) | -4.2  | 68  | 1.06 | 1.1E-03 |
| k99_394872  | Branched-chainaminoacidaminotransferase(EC2.6.1.42) | -4.3  | 304 | 0.61 | 3.3E-10 |
| k99_487749  | Branched-chainaminoacidaminotransferase(EC2.6.1.42) | -4.4  | 30  | 1.16 | 2.1E-03 |
| k99_646571  | Branched-chainaminoacidaminotransferase(EC2.6.1.42) | -4.6  | 39  | 1.34 | 5.8E-03 |
| k99_568213  | Branched-chainaminoacidaminotransferase(EC2.6.1.42) | -4.8  | 15  | 1.33 | 4.1E-03 |
| k99_1379648 | Branched-chainaminoacidaminotransferase(EC2.6.1.42) | -4.8  | 267 | 0.62 | 3.0E-12 |
| k99_186755  | Branched-chainaminoacidaminotransferase(EC2.6.1.42) | -4.9  | 17  | 1.48 | 8.0E-03 |
| k99_1212599 | Branched-chainaminoacidaminotransferase(EC2.6.1.42) | -5.0  | 30  | 1.19 | 4.8E-04 |
| k99_399937  | Branched-chainaminoacidaminotransferase(EC2.6.1.42) | -5.1  | 30  | 1.34 | 2.1E-03 |
| k99_284300  | Branched-chainaminoacidaminotransferase(EC2.6.1.42) | -5.1  | 19  | 1.44 | 4.3E-03 |
| k99_1368491 | Branched-chainaminoacidaminotransferase(EC2.6.1.42) | -5.5  | 12  | 1.69 | 9.7E-03 |
| k99_159250  | Branched-chainaminoacidaminotransferase(EC2.6.1.42) | -6.1  | 80  | 0.92 | 4.4E-09 |
| k99_1086563 | Branched-chainaminoacidaminotransferase(EC2.6.1.42) | -6.2  | 96  | 0.87 | 2.8E-10 |
| k99_922789  | Branched-chainaminoacidaminotransferase(EC2.6.1.42) | -6.7  | 7   | 2.02 | 9.0E-03 |
| k99_1291897 | Branched-chainaminoacidaminotransferase(EC2.6.1.42) | -6.7  | 8   | 2.05 | 9.3E-03 |
| k99_896807  | Branched-chainaminoacidaminotransferase(EC2.6.1.42) | -6.7  | 28  | 1.40 | 4.7E-05 |
| k99_303529  | Branched-chainaminoacidaminotransferase(EC2.6.1.42) | -7.1  | 10  | 2.03 | 5.1E-03 |

|             |                                                     |      |     |      |         |
|-------------|-----------------------------------------------------|------|-----|------|---------|
| k99_62456   | Branched-chainaminoacidaminotransferase(EC2.6.1.42) | -7.1 | 10  | 1.94 | 3.1E-03 |
| k99_856150  | Branched-chainaminoacidaminotransferase(EC2.6.1.42) | -7.3 | 23  | 1.57 | 8.3E-05 |
| k99_68148   | Branched-chainaminoacidaminotransferase(EC2.6.1.42) | -7.4 | 13  | 1.97 | 2.4E-03 |
| k99_941237  | Branched-chainaminoacidaminotransferase(EC2.6.1.42) | -7.5 | 13  | 1.75 | 4.2E-04 |
| k99_478448  | Branched-chainaminoacidaminotransferase(EC2.6.1.42) | -7.6 | 14  | 1.75 | 3.5E-04 |
| k99_1217757 | Branched-chainaminoacidaminotransferase(EC2.6.1.42) | -7.9 | 17  | 1.93 | 8.2E-04 |
| k99_1030414 | Branched-chainaminoacidaminotransferase(EC2.6.1.42) | -8.0 | 19  | 1.82 | 2.7E-04 |
| k99_71255   | Branched-chainaminoacidaminotransferase(EC2.6.1.42) | -8.7 | 30  | 1.55 | 1.4E-06 |
| k99_436334  | Branched-chainaminoacidaminotransferase(EC2.6.1.42) | -8.7 | 31  | 1.56 | 1.5E-06 |
| k99_1152707 | Branched-chainaminoacidaminotransferase(EC2.6.1.42) | -9.2 | 42  | 1.46 | 3.4E-08 |
| k99_509007  | Branched-chainaminoacidaminotransferase(EC2.6.1.42) | -9.3 | 47  | 1.46 | 2.0E-08 |
| k99_146359  | Branched-chainaminoacidaminotransferase(EC2.6.1.42) | -9.6 | 214 | 1.21 | 9.1E-13 |
| k99_1460006 | Carbonicanhydrase(EC4.2.1.1)                        | 9.9  | 102 | 1.73 | 6.2E-07 |
| k99_428969  | Carbonicanhydrase(EC4.2.1.1)                        | 9.9  | 99  | 1.58 | 3.9E-08 |
| k99_443380  | Carbonicanhydrase(EC4.2.1.1)                        | 9.3  | 66  | 1.69 | 2.2E-06 |
| k99_1155586 | Carbonicanhydrase(EC4.2.1.1)                        | 7.8  | 23  | 1.73 | 1.8E-04 |
| k99_1229550 | Carbonicanhydrase(EC4.2.1.1)                        | 7.7  | 22  | 1.63 | 7.3E-05 |
| k99_1380080 | Carbonicanhydrase(EC4.2.1.1)                        | 7.6  | 20  | 1.96 | 1.7E-03 |
| k99_676717  | Carbonicanhydrase(EC4.2.1.1)                        | 7.2  | 16  | 2.01 | 3.9E-03 |
| k99_33802   | Carbonicanhydrase(EC4.2.1.1)                        | 7.0  | 14  | 1.81 | 1.5E-03 |
| k99_1049223 | Carbonicanhydrase(EC4.2.1.1)                        | 6.9  | 13  | 1.75 | 1.3E-03 |
| k99_1390871 | Carbonicanhydrase(EC4.2.1.1)                        | 6.8  | 12  | 1.86 | 3.1E-03 |
| k99_1238400 | Carbonicanhydrase(EC4.2.1.1)                        | 6.8  | 12  | 1.77 | 1.8E-03 |
| k99_86652   | Carbonicanhydrase(EC4.2.1.1)                        | 6.4  | 9   | 1.92 | 7.5E-03 |
| k99_621419  | Carbonicanhydrase(EC4.2.1.1)                        | 6.4  | 9   | 1.95 | 9.8E-03 |
| k99_812879  | Carbonicanhydrase(EC4.2.1.1)                        | 5.7  | 81  | 1.46 | 1.4E-03 |
| k99_552640  | Carbonicanhydrase(EC4.2.1.1)                        | 5.7  | 20  | 1.66 | 6.3E-03 |
| k99_6715    | Carbonicanhydrase(EC4.2.1.1)                        | 5.6  | 76  | 1.06 | 5.7E-06 |
| k99_431860  | Carbonicanhydrase(EC4.2.1.1)                        | 4.9  | 36  | 1.51 | 9.6E-03 |
| k99_470310  | Carbonicanhydrase(EC4.2.1.1)                        | 4.7  | 150 | 1.28 | 3.4E-03 |
| k99_208983  | Carbonicanhydrase(EC4.2.1.1)                        | 4.5  | 28  | 1.21 | 2.5E-03 |
| k99_805229  | Carbonicanhydrase(EC4.2.1.1)                        | 4.3  | 81  | 1.23 | 4.7E-03 |
| k99_1398398 | Carbonicanhydrase(EC4.2.1.1)                        | 3.7  | 38  | 1.06 | 4.7E-03 |
| k99_697702  | Carbonicanhydrase(EC4.2.1.1)                        | 3.4  | 144 | 0.66 | 1.7E-05 |
| k99_28305   | Carbonicanhydrase(EC4.2.1.1)                        | 3.2  | 31  | 0.91 | 4.6E-03 |
| k99_687428  | Carbonicanhydrase(EC4.2.1.1)                        | 3.2  | 23  | 0.96 | 9.6E-03 |
| k99_1245672 | Carbonicanhydrase(EC4.2.1.1)                        | 3.1  | 70  | 0.87 | 3.9E-03 |
| k99_68665   | Carbonicanhydrase(EC4.2.1.1)                        | 3.0  | 32  | 0.89 | 6.3E-03 |
| k99_63682   | Carbonicanhydrase(EC4.2.1.1)                        | 2.9  | 60  | 0.71 | 1.0E-03 |
| k99_376976  | Carbonicanhydrase(EC4.2.1.1)                        | 2.8  | 136 | 0.76 | 2.9E-03 |
| k99_1382722 | Carbonicanhydrase(EC4.2.1.1)                        | 2.7  | 138 | 0.70 | 1.6E-03 |
| k99_242340  | Carbonicanhydrase(EC4.2.1.1)                        | 2.6  | 221 | 0.69 | 2.2E-03 |
| k99_436316  | Carbonicanhydrase(EC4.2.1.1)                        | 2.6  | 208 | 0.74 | 5.0E-03 |
| k99_69512   | Carbonicanhydrase(EC4.2.1.1)                        | 2.4  | 69  | 0.64 | 2.6E-03 |
| k99_434009  | Carbonicanhydrase(EC4.2.1.1)                        | 2.3  | 96  | 0.70 | 8.3E-03 |
| k99_307501  | Carbonicanhydrase(EC4.2.1.1)                        | 2.2  | 472 | 0.67 | 9.3E-03 |
| k99_590320  | Carbonicanhydrase(EC4.2.1.1)                        | 2.1  | 185 | 0.62 | 8.1E-03 |
| k99_301792  | Carbonicanhydrase(EC4.2.1.1)                        | -1.9 | 307 | 0.51 | 2.1E-03 |
| k99_761709  | Carbonicanhydrase(EC4.2.1.1)                        | -2.3 | 342 | 0.64 | 4.7E-03 |
| k99_413941  | Carbonicanhydrase(EC4.2.1.1)                        | -2.4 | 336 | 0.63 | 2.3E-03 |
| k99_296573  | Carbonicanhydrase(EC4.2.1.1)                        | -2.4 | 205 | 0.63 | 2.0E-03 |
| k99_15906   | Carbonicanhydrase(EC4.2.1.1)                        | -2.5 | 36  | 0.76 | 7.7E-03 |
| k99_1565712 | Carbonicanhydrase(EC4.2.1.1)                        | -2.7 | 70  | 0.75 | 4.8E-03 |
| k99_21474   | Carbonicanhydrase(EC4.2.1.1)                        | -2.7 | 185 | 0.65 | 5.4E-04 |
| k99_1277557 | Carbonicanhydrase(EC4.2.1.1)                        | -2.7 | 120 | 0.75 | 3.1E-03 |

|             |                              |      |      |      |         |
|-------------|------------------------------|------|------|------|---------|
| k99_542351  | Carbonicanhydrase(EC4.2.1.1) | -3.0 | 168  | 0.66 | 1.3E-04 |
| k99_1195049 | Carbonicanhydrase(EC4.2.1.1) | -3.2 | 280  | 0.98 | 9.8E-03 |
| k99_391435  | Carbonicanhydrase(EC4.2.1.1) | -3.4 | 223  | 0.87 | 1.5E-03 |
| k99_815557  | Carbonicanhydrase(EC4.2.1.1) | -3.7 | 86   | 0.90 | 8.5E-04 |
| k99_1690544 | Carbonicanhydrase(EC4.2.1.1) | -3.7 | 122  | 0.78 | 6.7E-05 |
| k99_305348  | Carbonicanhydrase(EC4.2.1.1) | -3.7 | 169  | 0.83 | 2.1E-04 |
| k99_823419  | Carbonicanhydrase(EC4.2.1.1) | -3.8 | 34   | 0.96 | 1.0E-03 |
| k99_669489  | Carbonicanhydrase(EC4.2.1.1) | -3.9 | 36   | 1.06 | 3.4E-03 |
| k99_7319    | Carbonicanhydrase(EC4.2.1.1) | -3.9 | 29   | 0.90 | 3.5E-04 |
| k99_292429  | Carbonicanhydrase(EC4.2.1.1) | -3.9 | 21   | 1.16 | 7.6E-03 |
| k99_1397322 | Carbonicanhydrase(EC4.2.1.1) | -3.9 | 44   | 1.12 | 5.4E-03 |
| k99_1121561 | Carbonicanhydrase(EC4.2.1.1) | -4.0 | 46   | 0.81 | 3.3E-05 |
| k99_1148578 | Carbonicanhydrase(EC4.2.1.1) | -4.0 | 71   | 0.81 | 2.1E-05 |
| k99_823725  | Carbonicanhydrase(EC4.2.1.1) | -4.0 | 41   | 1.06 | 1.9E-03 |
| k99_1322313 | Carbonicanhydrase(EC4.2.1.1) | -4.1 | 53   | 0.91 | 1.6E-04 |
| k99_394287  | Carbonicanhydrase(EC4.2.1.1) | -4.1 | 19   | 1.22 | 7.5E-03 |
| k99_1222373 | Carbonicanhydrase(EC4.2.1.1) | -4.1 | 38   | 1.15 | 3.8E-03 |
| k99_617633  | Carbonicanhydrase(EC4.2.1.1) | -4.2 | 29   | 1.08 | 1.8E-03 |
| k99_665165  | Carbonicanhydrase(EC4.2.1.1) | -4.2 | 62   | 1.17 | 4.5E-03 |
| k99_685868  | Carbonicanhydrase(EC4.2.1.1) | -4.4 | 61   | 1.02 | 3.7E-04 |
| k99_585791  | Carbonicanhydrase(EC4.2.1.1) | -4.4 | 24   | 1.01 | 3.0E-04 |
| k99_1210904 | Carbonicanhydrase(EC4.2.1.1) | -4.4 | 53   | 0.82 | 3.3E-06 |
| k99_1682788 | Carbonicanhydrase(EC4.2.1.1) | -4.4 | 103  | 0.98 | 1.8E-04 |
| k99_1585647 | Carbonicanhydrase(EC4.2.1.1) | -4.5 | 54   | 1.07 | 5.4E-04 |
| k99_877258  | Carbonicanhydrase(EC4.2.1.1) | -4.6 | 14   | 1.39 | 8.7E-03 |
| k99_513318  | Carbonicanhydrase(EC4.2.1.1) | -4.7 | 111  | 0.71 | 4.5E-09 |
| k99_536083  | Carbonicanhydrase(EC4.2.1.1) | -4.7 | 42   | 1.31 | 3.7E-03 |
| k99_35832   | Carbonicanhydrase(EC4.2.1.1) | -4.7 | 31   | 1.14 | 6.2E-04 |
| k99_713332  | Carbonicanhydrase(EC4.2.1.1) | -4.8 | 66   | 1.01 | 6.7E-05 |
| k99_195885  | Carbonicanhydrase(EC4.2.1.1) | -4.8 | 130  | 0.63 | 9.1E-12 |
| k99_541361  | Carbonicanhydrase(EC4.2.1.1) | -4.9 | 24   | 1.38 | 4.9E-03 |
| k99_541723  | Carbonicanhydrase(EC4.2.1.1) | -5.0 | 90   | 0.94 | 6.8E-06 |
| k99_227995  | Carbonicanhydrase(EC4.2.1.1) | -5.0 | 16   | 1.44 | 6.1E-03 |
| k99_613809  | Carbonicanhydrase(EC4.2.1.1) | -5.0 | 18   | 1.27 | 1.4E-03 |
| k99_1214690 | Carbonicanhydrase(EC4.2.1.1) | -5.1 | 18   | 1.33 | 2.0E-03 |
| k99_1351887 | Carbonicanhydrase(EC4.2.1.1) | -5.1 | 34   | 1.08 | 6.7E-05 |
| k99_755902  | Carbonicanhydrase(EC4.2.1.1) | -5.4 | 23   | 1.43 | 2.1E-03 |
| k99_905112  | Carbonicanhydrase(EC4.2.1.1) | -5.5 | 80   | 1.25 | 2.7E-04 |
| k99_100004  | Carbonicanhydrase(EC4.2.1.1) | -5.6 | 37   | 1.24 | 1.7E-04 |
| k99_1113675 | Carbonicanhydrase(EC4.2.1.1) | -5.6 | 50   | 1.04 | 4.3E-06 |
| k99_15793   | Carbonicanhydrase(EC4.2.1.1) | -5.7 | 83   | 1.23 | 1.1E-04 |
| k99_110479  | Carbonicanhydrase(EC4.2.1.1) | -5.9 | 15   | 1.58 | 2.7E-03 |
| k99_430918  | Carbonicanhydrase(EC4.2.1.1) | -5.9 | 1526 | 0.60 | 2.9E-19 |
| k99_12795   | Carbonicanhydrase(EC4.2.1.1) | -5.9 | 32   | 1.43 | 6.9E-04 |
| k99_653317  | Carbonicanhydrase(EC4.2.1.1) | -6.1 | 36   | 1.24 | 2.9E-05 |
| k99_509882  | Carbonicanhydrase(EC4.2.1.1) | -6.1 | 40   | 1.25 | 3.4E-05 |
| k99_490038  | Carbonicanhydrase(EC4.2.1.1) | -6.4 | 758  | 0.68 | 1.3E-17 |
| k99_283999  | Carbonicanhydrase(EC4.2.1.1) | -6.5 | 71   | 1.11 | 3.1E-07 |
| k99_443204  | Carbonicanhydrase(EC4.2.1.1) | -6.5 | 72   | 1.17 | 1.4E-06 |
| k99_759862  | Carbonicanhydrase(EC4.2.1.1) | -6.6 | 25   | 1.53 | 3.9E-04 |
| k99_659830  | Carbonicanhydrase(EC4.2.1.1) | -6.6 | 86   | 1.17 | 8.8E-07 |
| k99_996532  | Carbonicanhydrase(EC4.2.1.1) | -6.7 | 8    | 2.04 | 9.4E-03 |
| k99_298151  | Carbonicanhydrase(EC4.2.1.1) | -6.7 | 8    | 1.99 | 7.7E-03 |
| k99_77129   | Carbonicanhydrase(EC4.2.1.1) | -6.8 | 8    | 1.98 | 6.1E-03 |
| k99_45749   | Carbonicanhydrase(EC4.2.1.1) | -6.8 | 8    | 1.96 | 5.2E-03 |

|             |                              |      |     |      |         |
|-------------|------------------------------|------|-----|------|---------|
| k99_688363  | Carbonicanhydrase(EC4.2.1.1) | -6.8 | 8   | 1.99 | 6.1E-03 |
| k99_708463  | Carbonicanhydrase(EC4.2.1.1) | -6.8 | 8   | 2.02 | 7.1E-03 |
| k99_1066476 | Carbonicanhydrase(EC4.2.1.1) | -6.9 | 9   | 2.03 | 6.8E-03 |
| k99_398601  | Carbonicanhydrase(EC4.2.1.1) | -7.0 | 34  | 1.36 | 1.2E-05 |
| k99_94371   | Carbonicanhydrase(EC4.2.1.1) | -7.0 | 10  | 2.02 | 5.2E-03 |
| k99_1307418 | Carbonicanhydrase(EC4.2.1.1) | -7.1 | 10  | 1.86 | 2.1E-03 |
| k99_541959  | Carbonicanhydrase(EC4.2.1.1) | -7.1 | 10  | 1.88 | 2.2E-03 |
| k99_817894  | Carbonicanhydrase(EC4.2.1.1) | -7.2 | 11  | 1.91 | 2.4E-03 |
| k99_1658687 | Carbonicanhydrase(EC4.2.1.1) | -7.2 | 11  | 1.86 | 1.6E-03 |
| k99_1431962 | Carbonicanhydrase(EC4.2.1.1) | -7.3 | 12  | 1.85 | 1.3E-03 |
| k99_870642  | Carbonicanhydrase(EC4.2.1.1) | -7.4 | 13  | 1.76 | 5.2E-04 |
| k99_810731  | Carbonicanhydrase(EC4.2.1.1) | -7.4 | 13  | 1.76 | 5.2E-04 |
| k99_1659341 | Carbonicanhydrase(EC4.2.1.1) | -7.5 | 13  | 1.74 | 4.1E-04 |
| k99_1352212 | Carbonicanhydrase(EC4.2.1.1) | -7.5 | 13  | 1.97 | 2.2E-03 |
| k99_1076673 | Carbonicanhydrase(EC4.2.1.1) | -7.5 | 13  | 1.80 | 6.5E-04 |
| k99_333245  | Carbonicanhydrase(EC4.2.1.1) | -7.5 | 13  | 1.79 | 6.0E-04 |
| k99_1323407 | Carbonicanhydrase(EC4.2.1.1) | -7.5 | 13  | 1.73 | 3.3E-04 |
| k99_345918  | Carbonicanhydrase(EC4.2.1.1) | -7.5 | 14  | 1.79 | 5.5E-04 |
| k99_831985  | Carbonicanhydrase(EC4.2.1.1) | -7.6 | 14  | 1.75 | 3.2E-04 |
| k99_192224  | Carbonicanhydrase(EC4.2.1.1) | -7.6 | 14  | 1.71 | 2.2E-04 |
| k99_880423  | Carbonicanhydrase(EC4.2.1.1) | -7.6 | 14  | 1.72 | 2.4E-04 |
| k99_948388  | Carbonicanhydrase(EC4.2.1.1) | -7.6 | 14  | 1.79 | 4.4E-04 |
| k99_36892   | Carbonicanhydrase(EC4.2.1.1) | -7.6 | 15  | 1.73 | 2.6E-04 |
| k99_305449  | Carbonicanhydrase(EC4.2.1.1) | -7.7 | 15  | 1.73 | 2.3E-04 |
| k99_447745  | Carbonicanhydrase(EC4.2.1.1) | -7.7 | 16  | 1.68 | 1.1E-04 |
| k99_312668  | Carbonicanhydrase(EC4.2.1.1) | -7.9 | 18  | 1.83 | 3.5E-04 |
| k99_978113  | Carbonicanhydrase(EC4.2.1.1) | -7.9 | 18  | 1.68 | 7.7E-05 |
| k99_331148  | Carbonicanhydrase(EC4.2.1.1) | -7.9 | 18  | 1.69 | 8.4E-05 |
| k99_1331395 | Carbonicanhydrase(EC4.2.1.1) | -8.0 | 19  | 1.64 | 3.7E-05 |
| k99_152169  | Carbonicanhydrase(EC4.2.1.1) | -8.0 | 19  | 1.67 | 5.2E-05 |
| k99_1656826 | Carbonicanhydrase(EC4.2.1.1) | -8.1 | 20  | 1.71 | 7.9E-05 |
| k99_990951  | Carbonicanhydrase(EC4.2.1.1) | -8.1 | 20  | 1.63 | 2.9E-05 |
| k99_789141  | Carbonicanhydrase(EC4.2.1.1) | -8.1 | 70  | 1.31 | 6.4E-08 |
| k99_1593631 | Carbonicanhydrase(EC4.2.1.1) | -8.1 | 20  | 1.65 | 3.6E-05 |
| k99_8048    | Carbonicanhydrase(EC4.2.1.1) | -8.1 | 20  | 1.62 | 2.2E-05 |
| k99_640526  | Carbonicanhydrase(EC4.2.1.1) | -8.1 | 20  | 1.65 | 3.2E-05 |
| k99_277133  | Carbonicanhydrase(EC4.2.1.1) | -8.2 | 21  | 1.61 | 1.7E-05 |
| k99_11444   | Carbonicanhydrase(EC4.2.1.1) | -8.2 | 78  | 1.28 | 1.8E-08 |
| k99_1422455 | Carbonicanhydrase(EC4.2.1.1) | -8.3 | 23  | 1.57 | 5.9E-06 |
| k99_734168  | Carbonicanhydrase(EC4.2.1.1) | -8.7 | 31  | 1.60 | 2.6E-06 |
| k99_1339693 | Carbonicanhydrase(EC4.2.1.1) | -8.8 | 34  | 1.53 | 5.1E-07 |
| k99_876979  | Carbonicanhydrase(EC4.2.1.1) | -8.9 | 34  | 1.56 | 8.5E-07 |
| k99_431455  | Carbonicanhydrase(EC4.2.1.1) | -8.9 | 34  | 1.62 | 2.6E-06 |
| k99_967852  | Carbonicanhydrase(EC4.2.1.1) | -9.0 | 37  | 1.52 | 3.0E-07 |
| k99_140101  | Carbonicanhydrase(EC4.2.1.1) | -9.1 | 144 | 1.22 | 3.6E-11 |
| k99_670163  | Carbonicanhydrase(EC4.2.1.1) | -9.1 | 39  | 1.54 | 3.3E-07 |
| k99_522695  | Carbonicanhydrase(EC4.2.1.1) | -9.1 | 40  | 1.50 | 1.2E-07 |
| k99_555175  | Carbonicanhydrase(EC4.2.1.1) | -9.4 | 49  | 1.43 | 7.4E-09 |
| k99_547144  | Carbonicanhydrase(EC4.2.1.1) | -9.5 | 52  | 1.46 | 9.7E-09 |
| k99_225746  | Carbonicanhydrase(EC4.2.1.1) | -9.5 | 55  | 1.45 | 6.1E-09 |
| k99_562458  | Carbonicanhydrase(EC4.2.1.1) | -9.6 | 57  | 1.51 | 2.1E-08 |
| k99_149327  | Carbonicanhydrase(EC4.2.1.1) | -9.7 | 61  | 1.45 | 3.8E-09 |
| k99_194084  | Carbonicanhydrase(EC4.2.1.1) | -9.7 | 63  | 1.45 | 2.7E-09 |
| k99_185487  | Carbonicanhydrase(EC4.2.1.1) | -9.8 | 66  | 1.44 | 1.6E-09 |
| k99_372385  | Carbonicanhydrase(EC4.2.1.1) | -9.9 | 70  | 1.43 | 8.5E-10 |

|             |                                               |       |      |      |         |
|-------------|-----------------------------------------------|-------|------|------|---------|
| k99_872863  | Carbonicanhydrase(EC4.2.1.1)                  | -10.0 | 74   | 1.42 | 4.8E-10 |
| k99_999789  | Carbonicanhydrase(EC4.2.1.1)                  | -10.1 | 81   | 1.44 | 4.5E-10 |
| k99_412821  | Carbonicanhydrase(EC4.2.1.1)                  | -10.1 | 83   | 1.40 | 1.1E-10 |
| k99_506494  | Carbonicanhydrase(EC4.2.1.1)                  | -10.3 | 94   | 1.38 | 2.8E-11 |
| k99_614305  | Carbonicanhydrase(EC4.2.1.1)                  | -10.4 | 103  | 1.40 | 2.2E-11 |
| k99_213447  | Carbonicanhydrase(EC4.2.1.1)                  | -10.7 | 121  | 1.47 | 9.0E-11 |
| k99_933373  | Carbonicanhydrase(EC4.2.1.1)                  | -10.9 | 139  | 1.36 | 6.1E-13 |
| k99_1016189 | Carbonicanhydrase(EC4.2.1.1)                  | -11.1 | 167  | 1.35 | 8.4E-14 |
| k99_253556  | Carbonicanhydrase(EC4.2.1.1)                  | -12.1 | 329  | 1.33 | 1.2E-16 |
| k99_810429  | Cyanatehydratase(EC4.2.1.104)                 | 8.6   | 40   | 1.68 | 1.2E-05 |
| k99_291079  | Fructose-1,6-bisphosphatase,typeI(EC3.1.3.11) | 7.0   | 13   | 2.06 | 7.2E-03 |
| k99_909891  | Fructose-1,6-bisphosphatase,typeI(EC3.1.3.11) | 5.5   | 17   | 1.55 | 4.8E-03 |
| k99_312448  | Fructose-1,6-bisphosphatase,typeI(EC3.1.3.11) | 4.2   | 88   | 1.25 | 8.3E-03 |
| k99_1022605 | Fructose-1,6-bisphosphatase,typeI(EC3.1.3.11) | 2.7   | 116  | 0.77 | 5.2E-03 |
| k99_577216  | Fructose-1,6-bisphosphatase,typeI(EC3.1.3.11) | 2.1   | 188  | 0.64 | 7.6E-03 |
| k99_115295  | Fructose-1,6-bisphosphatase,typeI(EC3.1.3.11) | 1.8   | 224  | 0.55 | 1.0E-02 |
| k99_174245  | Fructose-1,6-bisphosphatase,typeI(EC3.1.3.11) | -2.3  | 2957 | 0.67 | 7.3E-03 |
| k99_776647  | Fructose-1,6-bisphosphatase,typeI(EC3.1.3.11) | -2.5  | 73   | 0.65 | 1.6E-03 |
| k99_791949  | Fructose-1,6-bisphosphatase,typeI(EC3.1.3.11) | -2.8  | 44   | 0.79 | 5.3E-03 |
| k99_1170430 | Fructose-1,6-bisphosphatase,typeI(EC3.1.3.11) | -2.8  | 35   | 0.81 | 5.0E-03 |
| k99_797058  | Fructose-1,6-bisphosphatase,typeI(EC3.1.3.11) | -2.9  | 53   | 0.75 | 1.3E-03 |
| k99_1226037 | Fructose-1,6-bisphosphatase,typeI(EC3.1.3.11) | -3.6  | 42   | 0.83 | 3.5E-04 |
| k99_2525    | Fructose-1,6-bisphosphatase,typeI(EC3.1.3.11) | -3.7  | 212  | 0.81 | 1.5E-04 |
| k99_292592  | Fructose-1,6-bisphosphatase,typeI(EC3.1.3.11) | -3.9  | 79   | 1.08 | 3.8E-03 |
| k99_1391950 | Fructose-1,6-bisphosphatase,typeI(EC3.1.3.11) | -4.2  | 163  | 0.94 | 1.8E-04 |
| k99_942010  | Fructose-1,6-bisphosphatase,typeI(EC3.1.3.11) | -4.2  | 233  | 0.60 | 2.4E-10 |
| k99_1163230 | Fructose-1,6-bisphosphatase,typeI(EC3.1.3.11) | -4.5  | 36   | 1.08 | 6.5E-04 |
| k99_1596701 | Fructose-1,6-bisphosphatase,typeI(EC3.1.3.11) | -4.5  | 68   | 0.79 | 8.1E-07 |
| k99_1022971 | Fructose-1,6-bisphosphatase,typeI(EC3.1.3.11) | -4.6  | 175  | 0.76 | 8.4E-08 |
| k99_1203011 | Fructose-1,6-bisphosphatase,typeI(EC3.1.3.11) | -4.6  | 21   | 1.33 | 5.4E-03 |
| k99_966901  | Fructose-1,6-bisphosphatase,typeI(EC3.1.3.11) | -4.7  | 538  | 0.51 | 1.1E-16 |
| k99_345984  | Fructose-1,6-bisphosphatase,typeI(EC3.1.3.11) | -4.7  | 41   | 1.33 | 4.5E-03 |
| k99_11189   | Fructose-1,6-bisphosphatase,typeI(EC3.1.3.11) | -4.8  | 343  | 0.56 | 3.4E-15 |
| k99_330663  | Fructose-1,6-bisphosphatase,typeI(EC3.1.3.11) | -5.2  | 95   | 1.04 | 2.1E-05 |
| k99_1480390 | Fructose-1,6-bisphosphatase,typeI(EC3.1.3.11) | -5.2  | 85   | 0.94 | 1.7E-06 |
| k99_1686550 | Fructose-1,6-bisphosphatase,typeI(EC3.1.3.11) | -5.5  | 157  | 0.97 | 8.4E-07 |
| k99_1087538 | Fructose-1,6-bisphosphatase,typeI(EC3.1.3.11) | -5.6  | 52   | 1.22 | 1.2E-04 |
| k99_1550927 | Fructose-1,6-bisphosphatase,typeI(EC3.1.3.11) | -5.6  | 28   | 1.35 | 6.0E-04 |
| k99_1686264 | Fructose-1,6-bisphosphatase,typeI(EC3.1.3.11) | -6.1  | 60   | 1.19 | 1.0E-05 |
| k99_91970   | Fructose-1,6-bisphosphatase,typeI(EC3.1.3.11) | -6.5  | 49   | 1.20 | 3.2E-06 |
| k99_477404  | Fructose-1,6-bisphosphatase,typeI(EC3.1.3.11) | -6.8  | 8    | 2.02 | 7.3E-03 |
| k99_817513  | Fructose-1,6-bisphosphatase,typeI(EC3.1.3.11) | -6.8  | 8    | 1.93 | 4.6E-03 |
| k99_870630  | Fructose-1,6-bisphosphatase,typeI(EC3.1.3.11) | -6.9  | 62   | 1.16 | 2.1E-07 |
| k99_1337703 | Fructose-1,6-bisphosphatase,typeI(EC3.1.3.11) | -6.9  | 9    | 2.00 | 5.5E-03 |
| k99_468516  | Fructose-1,6-bisphosphatase,typeI(EC3.1.3.11) | -7.0  | 68   | 1.03 | 2.1E-09 |
| k99_757216  | Fructose-1,6-bisphosphatase,typeI(EC3.1.3.11) | -7.1  | 10   | 1.86 | 2.0E-03 |
| k99_100976  | Fructose-1,6-bisphosphatase,typeI(EC3.1.3.11) | -7.1  | 10   | 1.87 | 2.2E-03 |
| k99_1433919 | Fructose-1,6-bisphosphatase,typeI(EC3.1.3.11) | -7.1  | 10   | 1.85 | 1.8E-03 |
| k99_1072659 | Fructose-1,6-bisphosphatase,typeI(EC3.1.3.11) | -7.3  | 11   | 1.81 | 1.0E-03 |
| k99_1243379 | Fructose-1,6-bisphosphatase,typeI(EC3.1.3.11) | -7.4  | 12   | 1.94 | 2.1E-03 |
| k99_102803  | Fructose-1,6-bisphosphatase,typeI(EC3.1.3.11) | -7.4  | 12   | 1.80 | 7.4E-04 |
| k99_647075  | Fructose-1,6-bisphosphatase,typeI(EC3.1.3.11) | -7.4  | 13   | 1.76 | 5.3E-04 |
| k99_814617  | Fructose-1,6-bisphosphatase,typeI(EC3.1.3.11) | -7.6  | 14   | 1.71 | 2.2E-04 |
| k99_1341133 | Fructose-1,6-bisphosphatase,typeI(EC3.1.3.11) | -7.6  | 14   | 1.71 | 2.1E-04 |
| k99_408044  | Fructose-1,6-bisphosphatase,typeI(EC3.1.3.11) | -7.7  | 15   | 2.31 | 8.3E-03 |

|             |                                                 |       |      |      |         |
|-------------|-------------------------------------------------|-------|------|------|---------|
| k99_866425  | Fructose-1,6-bisphosphatase,typeI(EC3.1.3.11)   | -8.8  | 33   | 1.49 | 2.5E-07 |
| k99_401782  | Fructose-1,6-bisphosphatase,typeI(EC3.1.3.11)   | -8.8  | 34   | 1.49 | 2.2E-07 |
| k99_366600  | Fructose-1,6-bisphosphatase,typeI(EC3.1.3.11)   | -10.5 | 103  | 1.37 | 8.2E-12 |
| k99_414727  | Fructose-bisphosphatealdolaseclassI(EC4.1.2.13) | 7.3   | 60   | 1.40 | 8.3E-06 |
| k99_308708  | Fructose-bisphosphatealdolaseclassI(EC4.1.2.13) | 4.1   | 322  | 1.12 | 3.1E-03 |
| k99_170906  | Fructose-bisphosphatealdolaseclassI(EC4.1.2.13) | 3.8   | 33   | 1.01 | 2.7E-03 |
| k99_1364036 | Fructose-bisphosphatealdolaseclassI(EC4.1.2.13) | 2.8   | 108  | 0.71 | 1.2E-03 |
| k99_422172  | Fructose-bisphosphatealdolaseclassI(EC4.1.2.13) | 2.7   | 103  | 0.79 | 7.0E-03 |
| k99_321911  | Fructose-bisphosphatealdolaseclassI(EC4.1.2.13) | 2.7   | 297  | 0.68 | 1.3E-03 |
| k99_118549  | Fructose-bisphosphatealdolaseclassI(EC4.1.2.13) | 2.5   | 338  | 0.64 | 1.3E-03 |
| k99_764179  | Fructose-bisphosphatealdolaseclassI(EC4.1.2.13) | 2.3   | 641  | 0.59 | 1.7E-03 |
| k99_98243   | Fructose-bisphosphatealdolaseclassI(EC4.1.2.13) | 2.2   | 217  | 0.57 | 2.3E-03 |
| k99_701771  | Fructose-bisphosphatealdolaseclassI(EC4.1.2.13) | 2.0   | 259  | 0.60 | 8.9E-03 |
| k99_833178  | Fructose-bisphosphatealdolaseclassI(EC4.1.2.13) | -2.7  | 114  | 0.68 | 1.4E-03 |
| k99_696736  | Fructose-bisphosphatealdolaseclassI(EC4.1.2.13) | -2.8  | 54   | 0.77 | 3.1E-03 |
| k99_913722  | Fructose-bisphosphatealdolaseclassI(EC4.1.2.13) | -2.9  | 33   | 0.84 | 5.5E-03 |
| k99_642519  | Fructose-bisphosphatealdolaseclassI(EC4.1.2.13) | -3.5  | 297  | 0.85 | 5.6E-04 |
| k99_213905  | Fructose-bisphosphatealdolaseclassI(EC4.1.2.13) | -3.6  | 393  | 0.92 | 1.2E-03 |
| k99_401010  | Fructose-bisphosphatealdolaseclassI(EC4.1.2.13) | -3.8  | 74   | 0.70 | 4.5E-06 |
| k99_1440311 | Fructose-bisphosphatealdolaseclassI(EC4.1.2.13) | -3.8  | 33   | 1.14 | 8.4E-03 |
| k99_1076115 | Fructose-bisphosphatealdolaseclassI(EC4.1.2.13) | -3.8  | 134  | 0.61 | 3.8E-08 |
| k99_191929  | Fructose-bisphosphatealdolaseclassI(EC4.1.2.13) | -3.8  | 46   | 1.13 | 7.3E-03 |
| k99_365804  | Fructose-bisphosphatealdolaseclassI(EC4.1.2.13) | -4.5  | 1379 | 1.03 | 2.4E-04 |
| k99_806025  | Fructose-bisphosphatealdolaseclassI(EC4.1.2.13) | -4.8  | 434  | 0.78 | 4.7E-08 |
| k99_1149684 | Fructose-bisphosphatealdolaseclassI(EC4.1.2.13) | -4.9  | 33   | 1.02 | 4.9E-05 |
| k99_502184  | Fructose-bisphosphatealdolaseclassI(EC4.1.2.13) | -5.2  | 105  | 0.95 | 3.1E-06 |
| k99_804561  | Fructose-bisphosphatealdolaseclassI(EC4.1.2.13) | -5.5  | 12   | 1.64 | 8.0E-03 |
| k99_1245036 | Fructose-bisphosphatealdolaseclassI(EC4.1.2.13) | -6.3  | 21   | 1.47 | 4.0E-04 |
| k99_1687777 | Fructose-bisphosphatealdolaseclassI(EC4.1.2.13) | -6.6  | 26   | 1.44 | 1.3E-04 |
| k99_1365802 | Fructose-bisphosphatealdolaseclassI(EC4.1.2.13) | -6.8  | 8    | 1.97 | 6.1E-03 |
| k99_437550  | Fructose-bisphosphatealdolaseclassI(EC4.1.2.13) | -6.8  | 8    | 2.02 | 7.5E-03 |
| k99_1561287 | Fructose-bisphosphatealdolaseclassI(EC4.1.2.13) | -6.8  | 8    | 1.98 | 5.9E-03 |
| k99_372943  | Fructose-bisphosphatealdolaseclassI(EC4.1.2.13) | -6.9  | 9    | 1.92 | 4.1E-03 |
| k99_1652391 | Fructose-bisphosphatealdolaseclassI(EC4.1.2.13) | -6.9  | 9    | 1.91 | 3.8E-03 |
| k99_651813  | Fructose-bisphosphatealdolaseclassI(EC4.1.2.13) | -6.9  | 9    | 1.93 | 3.8E-03 |
| k99_275648  | Fructose-bisphosphatealdolaseclassI(EC4.1.2.13) | -7.0  | 9    | 2.00 | 5.3E-03 |
| k99_432844  | Fructose-bisphosphatealdolaseclassI(EC4.1.2.13) | -7.0  | 9    | 1.95 | 4.1E-03 |
| k99_185710  | Fructose-bisphosphatealdolaseclassI(EC4.1.2.13) | -7.2  | 11   | 1.90 | 2.3E-03 |
| k99_140778  | Fructose-bisphosphatealdolaseclassI(EC4.1.2.13) | -7.2  | 11   | 1.86 | 1.7E-03 |
| k99_1266919 | Fructose-bisphosphatealdolaseclassI(EC4.1.2.13) | -7.2  | 197  | 0.83 | 5.7E-15 |
| k99_517580  | Fructose-bisphosphatealdolaseclassI(EC4.1.2.13) | -7.4  | 12   | 1.86 | 1.3E-03 |
| k99_1000066 | Fructose-bisphosphatealdolaseclassI(EC4.1.2.13) | -7.4  | 12   | 1.80 | 7.6E-04 |
| k99_174663  | Fructose-bisphosphatealdolaseclassI(EC4.1.2.13) | -7.4  | 25   | 1.58 | 8.0E-05 |
| k99_1340538 | Fructose-bisphosphatealdolaseclassI(EC4.1.2.13) | -7.6  | 14   | 1.71 | 2.0E-04 |
| k99_1470518 | Fructose-bisphosphatealdolaseclassI(EC4.1.2.13) | -7.8  | 16   | 1.74 | 2.1E-04 |
| k99_1661440 | Fructose-bisphosphatealdolaseclassI(EC4.1.2.13) | -7.8  | 16   | 1.68 | 1.1E-04 |
| k99_894465  | Fructose-bisphosphatealdolaseclassI(EC4.1.2.13) | -7.9  | 17   | 1.66 | 6.7E-05 |
| k99_1055705 | Fructose-bisphosphatealdolaseclassI(EC4.1.2.13) | -8.2  | 22   | 1.66 | 2.7E-05 |
| k99_33368   | Fructose-bisphosphatealdolaseclassI(EC4.1.2.13) | -8.4  | 24   | 1.57 | 5.0E-06 |
| k99_1381877 | Fructose-bisphosphatealdolaseclassI(EC4.1.2.13) | -8.4  | 25   | 1.61 | 7.6E-06 |
| k99_529418  | Fructose-bisphosphatealdolaseclassI(EC4.1.2.13) | -8.4  | 26   | 1.57 | 3.9E-06 |
| k99_301843  | Fructose-bisphosphatealdolaseclassI(EC4.1.2.13) | -8.5  | 26   | 1.55 | 2.3E-06 |
| k99_979208  | Fructose-bisphosphatealdolaseclassI(EC4.1.2.13) | -8.6  | 28   | 1.56 | 2.3E-06 |
| k99_1221244 | Fructose-bisphosphatealdolaseclassI(EC4.1.2.13) | -8.9  | 123  | 1.28 | 8.5E-10 |
| k99_835761  | Fructose-bisphosphatealdolaseclassI(EC4.1.2.13) | -9.2  | 43   | 1.45 | 2.6E-08 |

|             |                                                                               |       |      |      |         |
|-------------|-------------------------------------------------------------------------------|-------|------|------|---------|
| k99_1634726 | Fructose-bisphosphatealdolaseclassI(EC4.1.2.13)                               | -9.2  | 44   | 1.45 | 2.5E-08 |
| k99_417009  | Fructose-bisphosphatealdolaseclassI(EC4.1.2.13)                               | -9.3  | 46   | 1.44 | 1.5E-08 |
| k99_765090  | Fructose-bisphosphatealdolaseclassI(EC4.1.2.13)                               | -9.7  | 61   | 1.55 | 4.3E-08 |
| k99_1661869 | Fructose-bisphosphatealdolaseclassI(EC4.1.2.13)                               | -10.4 | 103  | 1.40 | 2.3E-11 |
| k99_1622505 | GlutamateN-acetyltransferase(EC2.3.1.35)/N-acetylglutamatesynthase(EC2.3.1.1) | 7.3   | 17   | 1.70 | 3.7E-04 |
| k99_547429  | GlutamateN-acetyltransferase(EC2.3.1.35)/N-acetylglutamatesynthase(EC2.3.1.1) | -4.2  | 116  | 0.76 | 1.6E-06 |
| k99_312677  | GlutamateN-acetyltransferase(EC2.3.1.35)/N-acetylglutamatesynthase(EC2.3.1.1) | -5.1  | 26   | 1.33 | 2.0E-03 |
| k99_647270  | GlutamateN-acetyltransferase(EC2.3.1.35)/N-acetylglutamatesynthase(EC2.3.1.1) | -5.3  | 31   | 1.27 | 5.5E-04 |
| k99_1297074 | GlutamateN-acetyltransferase(EC2.3.1.35)/N-acetylglutamatesynthase(EC2.3.1.1) | -9.0  | 38   | 1.47 | 9.2E-08 |
| k99_454980  | GlutamateN-acetyltransferase(EC2.3.1.35)/N-acetylglutamatesynthase(EC2.3.1.1) | -9.6  | 56   | 1.52 | 3.0E-08 |
| k99_740860  | GlutaminesynthetasetypeII,eukaryotic(EC6.3.1.2)                               | 7.1   | 15   | 2.02 | 4.8E-03 |
| k99_1344101 | GlutaminesynthetasetypeII,eukaryotic(EC6.3.1.2)                               | 6.9   | 12   | 2.06 | 8.1E-03 |
| k99_1611448 | GlutaminesynthetasetypeII,eukaryotic(EC6.3.1.2)                               | 6.7   | 41   | 1.38 | 4.0E-05 |
| k99_769143  | GlutaminesynthetasetypeII,eukaryotic(EC6.3.1.2)                               | 3.5   | 420  | 0.97 | 3.7E-03 |
| k99_1342513 | GlutaminesynthetasetypeII,eukaryotic(EC6.3.1.2)                               | 3.0   | 66   | 0.74 | 7.9E-04 |
| k99_895179  | GlutaminesynthetasetypeII,eukaryotic(EC6.3.1.2)                               | 2.8   | 253  | 0.67 | 6.8E-04 |
| k99_183036  | GlutaminesynthetasetypeII,eukaryotic(EC6.3.1.2)                               | -3.2  | 404  | 0.65 | 2.8E-05 |
| k99_665795  | GlutaminesynthetasetypeII,eukaryotic(EC6.3.1.2)                               | -3.3  | 46   | 0.81 | 9.5E-04 |
| k99_489351  | GlutaminesynthetasetypeII,eukaryotic(EC6.3.1.2)                               | -3.4  | 91   | 0.69 | 3.0E-05 |
| k99_257077  | GlutaminesynthetasetypeII,eukaryotic(EC6.3.1.2)                               | -3.6  | 239  | 0.65 | 2.5E-06 |
| k99_439251  | GlutaminesynthetasetypeII,eukaryotic(EC6.3.1.2)                               | -3.6  | 180  | 0.87 | 7.1E-04 |
| k99_1161242 | GlutaminesynthetasetypeII,eukaryotic(EC6.3.1.2)                               | -3.7  | 62   | 0.88 | 4.5E-04 |
| k99_49134   | GlutaminesynthetasetypeII,eukaryotic(EC6.3.1.2)                               | -3.8  | 83   | 0.87 | 3.5E-04 |
| k99_131782  | GlutaminesynthetasetypeII,eukaryotic(EC6.3.1.2)                               | -4.2  | 1458 | 0.49 | 3.9E-15 |
| k99_373247  | GlutaminesynthetasetypeII,eukaryotic(EC6.3.1.2)                               | -4.4  | 143  | 0.84 | 6.6E-06 |
| k99_536563  | GlutaminesynthetasetypeII,eukaryotic(EC6.3.1.2)                               | -4.5  | 53   | 1.07 | 4.9E-04 |
| k99_745127  | GlutaminesynthetasetypeII,eukaryotic(EC6.3.1.2)                               | -4.7  | 21   | 1.39 | 7.0E-03 |
| k99_195788  | GlutaminesynthetasetypeII,eukaryotic(EC6.3.1.2)                               | -5.2  | 83   | 0.95 | 2.3E-06 |
| k99_464011  | GlutaminesynthetasetypeII,eukaryotic(EC6.3.1.2)                               | -5.2  | 20   | 1.45 | 3.5E-03 |
| k99_39823   | GlutaminesynthetasetypeII,eukaryotic(EC6.3.1.2)                               | -5.2  | 110  | 0.92 | 7.0E-07 |
| k99_1149569 | GlutaminesynthetasetypeII,eukaryotic(EC6.3.1.2)                               | -5.3  | 22   | 1.37 | 1.6E-03 |
| k99_174318  | GlutaminesynthetasetypeII,eukaryotic(EC6.3.1.2)                               | -5.4  | 60   | 0.96 | 1.0E-06 |
| k99_1225234 | GlutaminesynthetasetypeII,eukaryotic(EC6.3.1.2)                               | -5.4  | 36   | 1.09 | 2.0E-05 |
| k99_1450591 | GlutaminesynthetasetypeII,eukaryotic(EC6.3.1.2)                               | -5.6  | 13   | 1.60 | 4.9E-03 |
| k99_539578  | GlutaminesynthetasetypeII,eukaryotic(EC6.3.1.2)                               | -5.9  | 31   | 1.29 | 1.5E-04 |
| k99_1403358 | GlutaminesynthetasetypeII,eukaryotic(EC6.3.1.2)                               | -6.3  | 62   | 0.90 | 7.0E-10 |
| k99_912451  | GlutaminesynthetasetypeII,eukaryotic(EC6.3.1.2)                               | -6.6  | 7    | 2.03 | 9.7E-03 |
| k99_726480  | GlutaminesynthetasetypeII,eukaryotic(EC6.3.1.2)                               | -6.6  | 52   | 1.16 | 6.5E-07 |
| k99_464578  | GlutaminesynthetasetypeII,eukaryotic(EC6.3.1.2)                               | -6.7  | 81   | 0.96 | 7.1E-10 |
| k99_237822  | GlutaminesynthetasetypeII,eukaryotic(EC6.3.1.2)                               | -6.7  | 27   | 1.42 | 7.9E-05 |
| k99_18539   | GlutaminesynthetasetypeII,eukaryotic(EC6.3.1.2)                               | -6.7  | 8    | 2.03 | 8.9E-03 |
| k99_652705  | GlutaminesynthetasetypeII,eukaryotic(EC6.3.1.2)                               | -6.9  | 9    | 1.91 | 3.8E-03 |
| k99_431415  | GlutaminesynthetasetypeII,eukaryotic(EC6.3.1.2)                               | -7.0  | 9    | 1.98 | 4.6E-03 |
| k99_748376  | GlutaminesynthetasetypeII,eukaryotic(EC6.3.1.2)                               | -7.0  | 9    | 2.06 | 6.7E-03 |
| k99_920028  | GlutaminesynthetasetypeII,eukaryotic(EC6.3.1.2)                               | -7.1  | 10   | 1.89 | 2.6E-03 |
| k99_1601965 | GlutaminesynthetasetypeII,eukaryotic(EC6.3.1.2)                               | -7.2  | 11   | 2.03 | 4.5E-03 |
| k99_1248328 | GlutaminesynthetasetypeII,eukaryotic(EC6.3.1.2)                               | -7.3  | 11   | 1.79 | 9.0E-04 |
| k99_720191  | GlutaminesynthetasetypeII,eukaryotic(EC6.3.1.2)                               | -7.3  | 303  | 0.84 | 3.2E-15 |
| k99_1580319 | GlutaminesynthetasetypeII,eukaryotic(EC6.3.1.2)                               | -7.4  | 12   | 1.85 | 1.1E-03 |
| k99_123947  | GlutaminesynthetasetypeII,eukaryotic(EC6.3.1.2)                               | -7.4  | 13   | 1.97 | 2.2E-03 |
| k99_1079445 | GlutaminesynthetasetypeII,eukaryotic(EC6.3.1.2)                               | -7.6  | 14   | 1.73 | 2.7E-04 |
| k99_605319  | GlutaminesynthetasetypeII,eukaryotic(EC6.3.1.2)                               | -7.6  | 14   | 1.71 | 2.3E-04 |
| k99_524640  | GlutaminesynthetasetypeII,eukaryotic(EC6.3.1.2)                               | -7.6  | 15   | 1.73 | 2.4E-04 |
| k99_95119   | GlutaminesynthetasetypeII,eukaryotic(EC6.3.1.2)                               | -7.7  | 606  | 0.73 | 4.3E-22 |
| k99_1679156 | GlutaminesynthetasetypeII,eukaryotic(EC6.3.1.2)                               | -7.8  | 16   | 1.80 | 3.2E-04 |

|             |                                                 |       |      |      |         |
|-------------|-------------------------------------------------|-------|------|------|---------|
| k99_126881  | GlutaminesynthetasetypeII,eukaryotic(EC6.3.1.2) | -7.9  | 18   | 1.69 | 8.7E-05 |
| k99_92552   | GlutaminesynthetasetypeII,eukaryotic(EC6.3.1.2) | -8.0  | 19   | 1.67 | 5.9E-05 |
| k99_914131  | GlutaminesynthetasetypeII,eukaryotic(EC6.3.1.2) | -8.0  | 19   | 1.89 | 4.6E-04 |
| k99_1205171 | GlutaminesynthetasetypeII,eukaryotic(EC6.3.1.2) | -8.1  | 20   | 1.61 | 1.9E-05 |
| k99_1183231 | GlutaminesynthetasetypeII,eukaryotic(EC6.3.1.2) | -8.1  | 21   | 1.59 | 1.4E-05 |
| k99_1039625 | GlutaminesynthetasetypeII,eukaryotic(EC6.3.1.2) | -8.4  | 26   | 1.56 | 3.3E-06 |
| k99_243323  | GlutaminesynthetasetypeII,eukaryotic(EC6.3.1.2) | -8.5  | 26   | 1.69 | 2.2E-05 |
| k99_127869  | GlutaminesynthetasetypeII,eukaryotic(EC6.3.1.2) | -8.7  | 31   | 1.53 | 7.6E-07 |
| k99_781641  | GlutaminesynthetasetypeII,eukaryotic(EC6.3.1.2) | -9.2  | 44   | 1.45 | 2.2E-08 |
| k99_1115093 | GlutaminesynthetasetypeII,eukaryotic(EC6.3.1.2) | -9.3  | 47   | 1.48 | 3.2E-08 |
| k99_1652413 | GlutaminesynthetasetypeII,eukaryotic(EC6.3.1.2) | -9.4  | 50   | 1.48 | 2.5E-08 |
| k99_551642  | GlutaminesynthetasetypeII,eukaryotic(EC6.3.1.2) | -9.7  | 60   | 1.43 | 2.0E-09 |
| k99_1249221 | GlutaminesynthetasetypeII,eukaryotic(EC6.3.1.2) | -10.4 | 97   | 1.37 | 1.4E-11 |
| k99_101030  | GlutaminesynthetasetypeIII,GlnN(EC6.3.1.2)      | 8.1   | 28   | 2.00 | 9.1E-04 |
| k99_822669  | GlutaminesynthetasetypeIII,GlnN(EC6.3.1.2)      | 6.9   | 13   | 1.85 | 2.5E-03 |
| k99_1002512 | GlutaminesynthetasetypeIII,GlnN(EC6.3.1.2)      | 6.8   | 11   | 1.84 | 3.2E-03 |
| k99_1477443 | GlutaminesynthetasetypeIII,GlnN(EC6.3.1.2)      | 3.3   | 73   | 0.76 | 3.9E-04 |
| k99_603628  | GlutaminesynthetasetypeIII,GlnN(EC6.3.1.2)      | 2.9   | 89   | 0.79 | 3.2E-03 |
| k99_463482  | GlutaminesynthetasetypeIII,GlnN(EC6.3.1.2)      | 2.7   | 90   | 0.69 | 1.5E-03 |
| k99_672132  | GlutaminesynthetasetypeIII,GlnN(EC6.3.1.2)      | 2.5   | 120  | 0.60 | 4.4E-04 |
| k99_442930  | GlutaminesynthetasetypeIII,GlnN(EC6.3.1.2)      | 2.5   | 127  | 0.58 | 3.0E-04 |
| k99_176212  | GlutaminesynthetasetypeIII,GlnN(EC6.3.1.2)      | 2.5   | 77   | 0.68 | 3.0E-03 |
| k99_398790  | GlutaminesynthetasetypeIII,GlnN(EC6.3.1.2)      | 2.3   | 92   | 0.69 | 9.4E-03 |
| k99_789099  | GlutaminesynthetasetypeIII,GlnN(EC6.3.1.2)      | 2.1   | 501  | 0.60 | 4.5E-03 |
| k99_376876  | GlutaminesynthetasetypeIII,GlnN(EC6.3.1.2)      | 1.8   | 369  | 0.54 | 7.2E-03 |
| k99_817441  | GlutaminesynthetasetypeIII,GlnN(EC6.3.1.2)      | -1.8  | 131  | 0.55 | 7.8E-03 |
| k99_906161  | GlutaminesynthetasetypeIII,GlnN(EC6.3.1.2)      | -2.8  | 57   | 0.69 | 1.0E-03 |
| k99_546401  | GlutaminesynthetasetypeIII,GlnN(EC6.3.1.2)      | -2.9  | 40   | 0.80 | 3.8E-03 |
| k99_1646113 | GlutaminesynthetasetypeIII,GlnN(EC6.3.1.2)      | -3.1  | 51   | 0.75 | 8.8E-04 |
| k99_447720  | GlutaminesynthetasetypeIII,GlnN(EC6.3.1.2)      | -3.9  | 254  | 0.58 | 2.6E-09 |
| k99_1588609 | GlutaminesynthetasetypeIII,GlnN(EC6.3.1.2)      | -4.0  | 29   | 1.12 | 3.9E-03 |
| k99_745485  | GlutaminesynthetasetypeIII,GlnN(EC6.3.1.2)      | -4.1  | 212  | 0.87 | 6.7E-05 |
| k99_646298  | GlutaminesynthetasetypeIII,GlnN(EC6.3.1.2)      | -4.3  | 27   | 0.94 | 1.5E-04 |
| k99_711050  | GlutaminesynthetasetypeIII,GlnN(EC6.3.1.2)      | -4.3  | 193  | 1.08 | 1.1E-03 |
| k99_6523    | GlutaminesynthetasetypeIII,GlnN(EC6.3.1.2)      | -4.6  | 40   | 0.95 | 4.4E-05 |
| k99_1234643 | GlutaminesynthetasetypeIII,GlnN(EC6.3.1.2)      | -4.9  | 24   | 1.42 | 5.4E-03 |
| k99_1148444 | GlutaminesynthetasetypeIII,GlnN(EC6.3.1.2)      | -5.0  | 51   | 0.97 | 1.1E-05 |
| k99_583301  | GlutaminesynthetasetypeIII,GlnN(EC6.3.1.2)      | -5.1  | 1102 | 0.64 | 8.4E-13 |
| k99_636622  | GlutaminesynthetasetypeIII,GlnN(EC6.3.1.2)      | -5.3  | 43   | 1.04 | 1.4E-05 |
| k99_227635  | GlutaminesynthetasetypeIII,GlnN(EC6.3.1.2)      | -5.5  | 35   | 1.09 | 2.1E-05 |
| k99_1085826 | GlutaminesynthetasetypeIII,GlnN(EC6.3.1.2)      | -5.9  | 52   | 1.21 | 3.8E-05 |
| k99_1298448 | GlutaminesynthetasetypeIII,GlnN(EC6.3.1.2)      | -6.0  | 107  | 0.88 | 1.4E-09 |
| k99_804753  | GlutaminesynthetasetypeIII,GlnN(EC6.3.1.2)      | -6.1  | 18   | 1.62 | 2.4E-03 |
| k99_1279631 | GlutaminesynthetasetypeIII,GlnN(EC6.3.1.2)      | -6.1  | 18   | 1.57 | 1.7E-03 |
| k99_767048  | GlutaminesynthetasetypeIII,GlnN(EC6.3.1.2)      | -6.1  | 56   | 1.04 | 3.8E-07 |
| k99_871064  | GlutaminesynthetasetypeIII,GlnN(EC6.3.1.2)      | -6.3  | 302  | 0.62 | 1.1E-20 |
| k99_1658201 | GlutaminesynthetasetypeIII,GlnN(EC6.3.1.2)      | -6.7  | 28   | 1.39 | 5.5E-05 |
| k99_926482  | GlutaminesynthetasetypeIII,GlnN(EC6.3.1.2)      | -6.8  | 29   | 1.40 | 4.6E-05 |
| k99_559559  | GlutaminesynthetasetypeIII,GlnN(EC6.3.1.2)      | -6.8  | 8    | 2.01 | 6.8E-03 |
| k99_941107  | GlutaminesynthetasetypeIII,GlnN(EC6.3.1.2)      | -6.8  | 8    | 1.95 | 5.1E-03 |
| k99_231560  | GlutaminesynthetasetypeIII,GlnN(EC6.3.1.2)      | -6.8  | 8    | 2.03 | 7.5E-03 |
| k99_1684321 | GlutaminesynthetasetypeIII,GlnN(EC6.3.1.2)      | -6.9  | 9    | 1.95 | 4.8E-03 |
| k99_370133  | GlutaminesynthetasetypeIII,GlnN(EC6.3.1.2)      | -6.9  | 9    | 1.95 | 4.5E-03 |
| k99_775581  | GlutaminesynthetasetypeIII,GlnN(EC6.3.1.2)      | -6.9  | 32   | 1.41 | 2.9E-05 |
| k99_472240  | GlutaminesynthetasetypeIII,GlnN(EC6.3.1.2)      | -7.0  | 53   | 1.18 | 1.8E-07 |

|             |                                                                  |       |     |      |         |
|-------------|------------------------------------------------------------------|-------|-----|------|---------|
| k99_794664  | GlutaminesynthetasetypeIII,GlnN(EC6.3.1.2)                       | -7.1  | 10  | 1.87 | 2.1E-03 |
| k99_195839  | GlutaminesynthetasetypeIII,GlnN(EC6.3.1.2)                       | -7.2  | 11  | 1.86 | 1.6E-03 |
| k99_802214  | GlutaminesynthetasetypeIII,GlnN(EC6.3.1.2)                       | -7.2  | 11  | 1.86 | 1.5E-03 |
| k99_618676  | GlutaminesynthetasetypeIII,GlnN(EC6.3.1.2)                       | -7.5  | 13  | 1.83 | 8.0E-04 |
| k99_480924  | GlutaminesynthetasetypeIII,GlnN(EC6.3.1.2)                       | -7.7  | 16  | 1.70 | 1.5E-04 |
| k99_1132649 | GlutaminesynthetasetypeIII,GlnN(EC6.3.1.2)                       | -8.0  | 18  | 1.64 | 4.1E-05 |
| k99_626304  | GlutaminesynthetasetypeIII,GlnN(EC6.3.1.2)                       | -8.0  | 19  | 1.62 | 2.6E-05 |
| k99_670335  | GlutaminesynthetasetypeIII,GlnN(EC6.3.1.2)                       | -8.2  | 21  | 1.59 | 1.1E-05 |
| k99_385501  | GlutaminesynthetasetypeIII,GlnN(EC6.3.1.2)                       | -8.2  | 22  | 1.65 | 2.5E-05 |
| k99_1563832 | GlutaminesynthetasetypeIII,GlnN(EC6.3.1.2)                       | -8.2  | 22  | 1.58 | 8.7E-06 |
| k99_936673  | GlutaminesynthetasetypeIII,GlnN(EC6.3.1.2)                       | -8.8  | 32  | 1.50 | 3.7E-07 |
| k99_1699146 | GlutaminesynthetasetypeIII,GlnN(EC6.3.1.2)                       | -8.8  | 34  | 1.51 | 3.4E-07 |
| k99_1290913 | GlutaminesynthetasetypeIII,GlnN(EC6.3.1.2)                       | -9.2  | 44  | 1.48 | 4.8E-08 |
| k99_563890  | GlutaminesynthetasetypeIII,GlnN(EC6.3.1.2)                       | -10.5 | 106 | 1.39 | 1.5E-11 |
| k99_494301  | Manganesesuperoxidedismutase(EC1.15.1.1)                         | 2.4   | 173 | 0.61 | 1.3E-03 |
| k99_658076  | Manganesesuperoxidedismutase(EC1.15.1.1)                         | -2.3  | 101 | 0.69 | 8.6E-03 |
| k99_220492  | Manganesesuperoxidedismutase(EC1.15.1.1)                         | -4.3  | 414 | 0.72 | 2.3E-07 |
| k99_72262   | Manganesesuperoxidedismutase(EC1.15.1.1)                         | -4.3  | 89  | 1.05 | 8.7E-04 |
| k99_231814  | Manganesesuperoxidedismutase(EC1.15.1.1)                         | -5.3  | 30  | 1.39 | 2.1E-03 |
| k99_1017631 | Manganesesuperoxidedismutase(EC1.15.1.1)                         | -6.0  | 18  | 1.59 | 2.1E-03 |
| k99_1175683 | Manganesesuperoxidedismutase(EC1.15.1.1)                         | -6.8  | 8   | 2.01 | 7.4E-03 |
| k99_1121595 | Manganesesuperoxidedismutase(EC1.15.1.1)                         | -7.1  | 10  | 1.98 | 4.1E-03 |
| k99_231786  | Manganesesuperoxidedismutase(EC1.15.1.1)                         | -7.2  | 11  | 1.98 | 3.2E-03 |
| k99_142308  | Manganesesuperoxidedismutase(EC1.15.1.1)                         | -7.3  | 12  | 1.80 | 8.8E-04 |
| k99_1400338 | Manganesesuperoxidedismutase(EC1.15.1.1)                         | -8.1  | 20  | 1.64 | 2.8E-05 |
| k99_631997  | Inositoltransportsystemsugar-bindingprotein □                    | 1.8   | 97  | 0.76 | 6.3E-02 |
| k99_1219518 | Myo-inositol2-dehydrogenase1(EC1.1.1.18)                         | -5.1  | 41  | 1.29 | 1.2E-03 |
| k99_325178  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | 9.1   | 56  | 1.42 | 1.8E-08 |
| k99_1331750 | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | 9.0   | 56  | 1.43 | 2.6E-08 |
| k99_1022979 | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | 8.3   | 34  | 1.73 | 5.0E-05 |
| k99_1242553 | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | 7.4   | 18  | 1.66 | 2.1E-04 |
| k99_1540782 | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | 7.1   | 14  | 1.72 | 7.8E-04 |
| k99_1573420 | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | 6.9   | 13  | 1.87 | 2.8E-03 |
| k99_100800  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | 6.9   | 13  | 1.94 | 4.3E-03 |
| k99_671865  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | 6.7   | 11  | 1.97 | 6.7E-03 |
| k99_1179930 | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | 6.6   | 10  | 1.95 | 7.6E-03 |
| k99_1268476 | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | 6.4   | 9   | 1.88 | 6.4E-03 |
| k99_1199557 | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | 6.0   | 72  | 1.20 | 2.8E-05 |
| k99_1285887 | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | 5.2   | 14  | 1.58 | 9.2E-03 |
| k99_939255  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | 5.2   | 357 | 1.38 | 2.5E-03 |
| k99_1139832 | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | 5.1   | 96  | 1.05 | 4.0E-05 |
| k99_1346241 | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | 4.9   | 464 | 1.30 | 2.4E-03 |
| k99_187062  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | 4.6   | 88  | 1.02 | 1.6E-04 |
| k99_866275  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | 4.6   | 68  | 1.21 | 2.0E-03 |
| k99_230666  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | 4.6   | 447 | 1.22 | 2.3E-03 |
| k99_691449  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | 4.1   | 49  | 1.06 | 1.5E-03 |
| k99_585565  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | 3.9   | 441 | 1.07 | 3.3E-03 |
| k99_1631338 | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | 3.7   | 36  | 1.07 | 6.3E-03 |
| k99_568238  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | 3.4   | 273 | 0.75 | 1.6E-04 |
| k99_748421  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | 3.2   | 70  | 0.71 | 1.4E-04 |
| k99_611803  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | 3.1   | 68  | 0.85 | 3.9E-03 |
| k99_1431525 | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | 3.0   | 102 | 0.93 | 9.6E-03 |
| k99_1679343 | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | 2.8   | 127 | 0.81 | 6.0E-03 |
| k99_1569219 | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | 2.7   | 41  | 0.82 | 7.5E-03 |
| k99_378540  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | 2.7   | 324 | 0.50 | 6.6E-06 |

|             |                                                                  |      |      |      |         |
|-------------|------------------------------------------------------------------|------|------|------|---------|
| k99_857786  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | 2.7  | 260  | 0.51 | 1.0E-05 |
| k99_1010965 | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | 2.5  | 187  | 0.74 | 6.2E-03 |
| k99_649112  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | 2.5  | 206  | 0.59 | 4.5E-04 |
| k99_1239692 | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | 2.5  | 280  | 0.53 | 9.7E-05 |
| k99_497891  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | 2.4  | 322  | 0.53 | 1.7E-04 |
| k99_1174478 | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | 2.2  | 485  | 0.52 | 3.5E-04 |
| k99_523715  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | 2.2  | 531  | 0.48 | 1.9E-04 |
| k99_741216  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | 2.1  | 458  | 0.57 | 3.1E-03 |
| k99_815565  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | 1.9  | 1350 | 0.54 | 6.2E-03 |
| k99_731718  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -1.9 | 195  | 0.53 | 4.9E-03 |
| k99_848107  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -2.1 | 329  | 0.63 | 9.4E-03 |
| k99_1451166 | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -2.1 | 221  | 0.60 | 4.5E-03 |
| k99_423268  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -2.1 | 432  | 0.59 | 3.7E-03 |
| k99_284875  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -2.2 | 79   | 0.65 | 8.1E-03 |
| k99_1009013 | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -2.2 | 1632 | 0.64 | 7.1E-03 |
| k99_828788  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -2.3 | 603  | 0.56 | 6.8E-04 |
| k99_118413  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -2.3 | 849  | 0.58 | 1.1E-03 |
| k99_582924  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -2.3 | 540  | 0.64 | 3.7E-03 |
| k99_1437511 | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -2.3 | 438  | 0.55 | 5.3E-04 |
| k99_1080973 | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -2.4 | 173  | 0.60 | 1.3E-03 |
| k99_628514  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -2.4 | 406  | 0.53 | 1.9E-04 |
| k99_1368342 | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -2.4 | 1067 | 0.72 | 9.0E-03 |
| k99_66135   | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -2.4 | 131  | 0.70 | 5.5E-03 |
| k99_115975  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -2.4 | 82   | 0.70 | 5.4E-03 |
| k99_288581  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -2.4 | 1623 | 0.56 | 3.0E-04 |
| k99_974555  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -2.5 | 88   | 0.72 | 6.3E-03 |
| k99_772308  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -2.5 | 208  | 0.67 | 2.7E-03 |
| k99_1133725 | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -2.5 | 527  | 0.61 | 7.6E-04 |
| k99_759707  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -2.5 | 207  | 0.70 | 4.0E-03 |
| k99_1325333 | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -2.5 | 61   | 0.74 | 6.8E-03 |
| k99_32881   | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -2.6 | 158  | 0.76 | 5.9E-03 |
| k99_759710  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -2.6 | 391  | 0.71 | 2.9E-03 |
| k99_820317  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -2.7 | 89   | 0.68 | 1.6E-03 |
| k99_448668  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -2.7 | 419  | 0.61 | 2.1E-04 |
| k99_273485  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -2.7 | 35   | 0.82 | 8.3E-03 |
| k99_1420854 | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -2.7 | 114  | 0.70 | 1.7E-03 |
| k99_125835  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -2.9 | 121  | 0.77 | 2.5E-03 |
| k99_503997  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -2.9 | 138  | 0.73 | 1.1E-03 |
| k99_710465  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -3.0 | 269  | 0.88 | 7.7E-03 |
| k99_405104  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -3.1 | 57   | 0.84 | 3.4E-03 |
| k99_11809   | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -3.1 | 36   | 0.90 | 6.6E-03 |
| k99_1664300 | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -3.1 | 63   | 0.76 | 8.0E-04 |
| k99_1012420 | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -3.2 | 137  | 0.81 | 1.4E-03 |
| k99_1388741 | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -3.2 | 92   | 0.95 | 7.6E-03 |
| k99_274585  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -3.2 | 31   | 0.88 | 3.7E-03 |
| k99_359028  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -3.2 | 275  | 0.51 | 4.6E-08 |
| k99_512667  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -3.3 | 159  | 0.70 | 5.9E-05 |
| k99_1631798 | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -3.4 | 72   | 0.70 | 4.2E-05 |
| k99_1204211 | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -3.4 | 312  | 0.90 | 2.2E-03 |
| k99_1174251 | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -3.5 | 93   | 0.65 | 3.9E-06 |
| k99_117212  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -3.5 | 54   | 1.06 | 8.0E-03 |
| k99_1373190 | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -3.6 | 268  | 0.55 | 8.8E-09 |
| k99_192477  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -3.7 | 71   | 0.77 | 4.3E-05 |
| k99_571880  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -3.8 | 629  | 0.63 | 2.0E-07 |
| k99_804979  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -3.8 | 197  | 0.62 | 9.3E-08 |

|             |                                                                  |      |      |      |         |
|-------------|------------------------------------------------------------------|------|------|------|---------|
| k99_412050  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -3.8 | 394  | 0.79 | 5.5E-05 |
| k99_465468  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -3.8 | 27   | 1.17 | 9.8E-03 |
| k99_82743   | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -3.8 | 3020 | 0.56 | 1.3E-09 |
| k99_192479  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -3.9 | 176  | 0.93 | 6.8E-04 |
| k99_582690  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -3.9 | 171  | 0.60 | 1.8E-08 |
| k99_983018  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -4.0 | 47   | 1.12 | 4.2E-03 |
| k99_1376616 | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -4.0 | 202  | 0.86 | 1.0E-04 |
| k99_652495  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -4.0 | 43   | 1.10 | 3.2E-03 |
| k99_866888  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -4.0 | 1265 | 0.71 | 8.2E-07 |
| k99_1422416 | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -4.1 | 22   | 1.19 | 6.6E-03 |
| k99_520670  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -4.1 | 135  | 0.76 | 2.8E-06 |
| k99_1088400 | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -4.1 | 32   | 1.19 | 5.4E-03 |
| k99_570507  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -4.2 | 241  | 0.65 | 1.5E-08 |
| k99_1444932 | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -4.2 | 31   | 1.15 | 3.5E-03 |
| k99_253859  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -4.2 | 21   | 1.20 | 5.2E-03 |
| k99_632461  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -4.2 | 54   | 1.25 | 7.2E-03 |
| k99_352004  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -4.2 | 2391 | 0.89 | 6.9E-05 |
| k99_429982  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -4.3 | 688  | 0.63 | 2.2E-09 |
| k99_709797  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -4.4 | 27   | 1.20 | 3.6E-03 |
| k99_718088  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -4.4 | 64   | 1.00 | 3.1E-04 |
| k99_89660   | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -4.4 | 71   | 0.74 | 2.0E-07 |
| k99_1098283 | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -4.4 | 25   | 1.17 | 2.2E-03 |
| k99_717926  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -4.5 | 220  | 0.87 | 1.3E-05 |
| k99_840627  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -4.5 | 69   | 1.03 | 2.9E-04 |
| k99_1377937 | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -4.6 | 40   | 1.07 | 4.1E-04 |
| k99_1043074 | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -4.7 | 61   | 0.79 | 3.5E-07 |
| k99_527195  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -4.7 | 452  | 0.65 | 1.2E-10 |
| k99_1230425 | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -4.8 | 29   | 1.33 | 4.0E-03 |
| k99_678462  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -4.8 | 37   | 1.02 | 7.6E-05 |
| k99_1409510 | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -4.8 | 39   | 0.99 | 3.1E-05 |
| k99_1043735 | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -4.9 | 399  | 1.09 | 1.8E-04 |
| k99_1246732 | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -4.9 | 71   | 1.01 | 3.5E-05 |
| k99_291497  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -4.9 | 184  | 0.97 | 1.5E-05 |
| k99_1526591 | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -5.0 | 17   | 1.44 | 5.6E-03 |
| k99_51519   | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -5.0 | 2005 | 0.59 | 2.0E-14 |
| k99_670083  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -5.0 | 35   | 1.32 | 2.0E-03 |
| k99_126051  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -5.0 | 2939 | 0.70 | 1.5E-10 |
| k99_1603197 | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -5.1 | 126  | 0.65 | 2.3E-12 |
| k99_956763  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -5.1 | 73   | 0.95 | 3.6E-06 |
| k99_180953  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -5.1 | 50   | 1.05 | 3.6E-05 |
| k99_188748  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -5.1 | 84   | 0.74 | 6.3E-10 |
| k99_219899  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -5.2 | 141  | 1.06 | 3.5E-05 |
| k99_1576794 | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -5.2 | 100  | 0.78 | 3.9E-09 |
| k99_1634727 | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -5.2 | 22   | 1.37 | 1.9E-03 |
| k99_1466259 | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -5.3 | 244  | 0.72 | 8.2E-11 |
| k99_584241  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -5.3 | 118  | 0.96 | 2.5E-06 |
| k99_1603187 | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -5.3 | 141  | 1.07 | 3.0E-05 |
| k99_1226079 | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -5.3 | 22   | 1.25 | 4.8E-04 |
| k99_1374070 | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -5.3 | 21   | 1.36 | 1.3E-03 |
| k99_227123  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -5.3 | 378  | 0.72 | 3.0E-11 |
| k99_124297  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -5.5 | 12   | 1.64 | 8.2E-03 |
| k99_1706086 | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -5.5 | 62   | 1.01 | 3.3E-06 |
| k99_1196820 | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -5.5 | 176  | 0.70 | 2.2E-12 |
| k99_1168945 | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -5.5 | 13   | 1.59 | 5.4E-03 |
| k99_1491623 | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -5.6 | 19   | 1.44 | 1.7E-03 |

|             |                                                                  |      |     |      |         |
|-------------|------------------------------------------------------------------|------|-----|------|---------|
| k99_410049  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -5.6 | 51  | 1.23 | 1.3E-04 |
| k99_1236348 | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -5.7 | 27  | 1.30 | 2.5E-04 |
| k99_1042302 | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -5.7 | 21  | 1.55 | 2.8E-03 |
| k99_8687    | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -5.7 | 42  | 1.20 | 5.3E-05 |
| k99_648317  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -5.8 | 182 | 0.63 | 1.6E-16 |
| k99_153842  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -5.8 | 15  | 1.56 | 2.6E-03 |
| k99_418464  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -5.8 | 61  | 0.87 | 2.9E-09 |
| k99_31574   | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -5.8 | 16  | 1.53 | 2.0E-03 |
| k99_412079  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -5.9 | 17  | 1.62 | 3.5E-03 |
| k99_860479  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -5.9 | 34  | 1.28 | 1.2E-04 |
| k99_14331   | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -5.9 | 17  | 1.58 | 2.5E-03 |
| k99_448168  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -6.0 | 169 | 1.04 | 4.8E-07 |
| k99_284870  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -6.3 | 30  | 1.40 | 2.0E-04 |
| k99_22789   | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -6.3 | 61  | 1.16 | 2.8E-06 |
| k99_922299  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -6.3 | 12  | 1.73 | 3.4E-03 |
| k99_284025  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -6.4 | 45  | 1.15 | 1.4E-06 |
| k99_23441   | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -6.5 | 13  | 1.73 | 2.4E-03 |
| k99_280450  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -6.5 | 24  | 1.44 | 1.6E-04 |
| k99_739312  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -6.5 | 48  | 1.20 | 2.9E-06 |
| k99_394084  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -6.6 | 319 | 0.88 | 2.1E-11 |
| k99_1317656 | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -6.7 | 43  | 1.22 | 2.7E-06 |
| k99_509114  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -6.7 | 122 | 1.10 | 9.7E-08 |
| k99_776096  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -6.7 | 28  | 1.40 | 4.9E-05 |
| k99_1247227 | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -6.7 | 8   | 2.01 | 7.5E-03 |
| k99_818950  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -6.8 | 16  | 1.63 | 6.2E-04 |
| k99_678632  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -6.8 | 384 | 0.89 | 6.7E-12 |
| k99_1003532 | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -6.9 | 187 | 0.74 | 3.6E-17 |
| k99_1680675 | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -6.9 | 31  | 1.41 | 3.6E-05 |
| k99_1453754 | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -6.9 | 31  | 1.40 | 3.2E-05 |
| k99_88141   | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -6.9 | 9   | 2.05 | 7.3E-03 |
| k99_121779  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -6.9 | 133 | 0.91 | 1.4E-11 |
| k99_1262721 | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -7.0 | 9   | 1.89 | 3.0E-03 |
| k99_867314  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -7.0 | 9   | 1.93 | 3.8E-03 |
| k99_1002531 | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -7.0 | 9   | 1.97 | 4.6E-03 |
| k99_1652863 | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -7.0 | 9   | 1.96 | 4.3E-03 |
| k99_389443  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -7.0 | 9   | 1.97 | 4.5E-03 |
| k99_1667970 | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -7.0 | 9   | 1.91 | 3.1E-03 |
| k99_355416  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -7.1 | 10  | 1.86 | 2.1E-03 |
| k99_955781  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -7.1 | 10  | 2.06 | 6.1E-03 |
| k99_90629   | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -7.1 | 10  | 1.96 | 3.5E-03 |
| k99_699811  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -7.1 | 10  | 1.88 | 2.2E-03 |
| k99_161961  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -7.1 | 10  | 1.83 | 1.6E-03 |
| k99_359728  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -7.2 | 11  | 1.93 | 2.6E-03 |
| k99_512386  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -7.2 | 11  | 1.85 | 1.4E-03 |
| k99_972065  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -7.3 | 11  | 2.02 | 3.8E-03 |
| k99_816079  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -7.3 | 11  | 1.89 | 1.8E-03 |
| k99_1162147 | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -7.3 | 12  | 1.78 | 7.2E-04 |
| k99_632102  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -7.3 | 12  | 1.81 | 9.1E-04 |
| k99_937828  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -7.3 | 12  | 1.82 | 9.8E-04 |
| k99_1504103 | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -7.3 | 127 | 0.90 | 2.7E-13 |
| k99_1507419 | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -7.4 | 12  | 1.84 | 1.0E-03 |
| k99_1162653 | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -7.4 | 69  | 1.11 | 3.8E-09 |
| k99_430380  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -7.4 | 12  | 1.80 | 7.3E-04 |
| k99_468180  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -7.4 | 13  | 1.83 | 8.7E-04 |
| k99_1600289 | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -7.5 | 14  | 1.89 | 1.2E-03 |

|             |                                                                  |       |      |      |         |
|-------------|------------------------------------------------------------------|-------|------|------|---------|
| k99_1392807 | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -7.5  | 14   | 1.73 | 3.0E-04 |
| k99_237046  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -7.5  | 150  | 0.85 | 9.1E-16 |
| k99_1185610 | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -7.6  | 27   | 1.55 | 3.9E-05 |
| k99_1322426 | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -7.6  | 14   | 1.73 | 2.7E-04 |
| k99_663409  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -7.6  | 14   | 1.79 | 4.6E-04 |
| k99_356371  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -7.6  | 1364 | 0.78 | 3.2E-19 |
| k99_985412  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -7.6  | 14   | 1.72 | 2.4E-04 |
| k99_1082201 | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -7.6  | 15   | 1.76 | 3.1E-04 |
| k99_94492   | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -7.7  | 15   | 1.69 | 1.5E-04 |
| k99_890309  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -7.7  | 15   | 1.70 | 1.5E-04 |
| k99_630369  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -7.7  | 58   | 1.29 | 2.0E-07 |
| k99_126178  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -7.7  | 30   | 1.48 | 8.4E-06 |
| k99_861419  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -7.7  | 16   | 1.77 | 2.8E-04 |
| k99_960063  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -7.8  | 58   | 1.30 | 2.0E-07 |
| k99_1703449 | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -7.8  | 16   | 1.73 | 1.8E-04 |
| k99_1134179 | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -7.8  | 17   | 1.67 | 7.6E-05 |
| k99_1610644 | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -7.9  | 129  | 0.97 | 1.8E-13 |
| k99_629667  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -7.9  | 18   | 1.63 | 4.2E-05 |
| k99_1443610 | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -8.0  | 18   | 1.65 | 4.6E-05 |
| k99_382396  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -8.0  | 131  | 1.04 | 6.2E-12 |
| k99_889603  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -8.0  | 18   | 1.64 | 4.0E-05 |
| k99_403276  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -8.0  | 19   | 2.31 | 5.5E-03 |
| k99_1490851 | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -8.1  | 20   | 1.60 | 1.5E-05 |
| k99_565121  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -8.2  | 21   | 1.59 | 1.2E-05 |
| k99_891917  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -8.3  | 133  | 1.09 | 8.1E-12 |
| k99_1703037 | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -8.4  | 47   | 1.44 | 4.8E-07 |
| k99_1560567 | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -8.4  | 25   | 1.55 | 3.0E-06 |
| k99_1546570 | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -8.5  | 27   | 1.60 | 5.6E-06 |
| k99_6941    | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -8.5  | 27   | 1.53 | 1.8E-06 |
| k99_693418  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -8.5  | 27   | 1.67 | 1.3E-05 |
| k99_273106  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -8.5  | 247  | 0.87 | 3.9E-19 |
| k99_1443314 | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -8.6  | 28   | 1.58 | 3.1E-06 |
| k99_528890  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -8.6  | 28   | 1.54 | 1.4E-06 |
| k99_1554896 | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -8.6  | 28   | 1.52 | 1.1E-06 |
| k99_548593  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -8.7  | 30   | 1.54 | 1.1E-06 |
| k99_1347436 | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -8.8  | 34   | 1.55 | 7.5E-07 |
| k99_1710269 | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -8.9  | 35   | 1.49 | 1.9E-07 |
| k99_320804  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -9.0  | 39   | 1.49 | 1.1E-07 |
| k99_1437547 | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -9.1  | 152  | 1.23 | 3.7E-11 |
| k99_1433220 | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -9.2  | 43   | 1.48 | 4.6E-08 |
| k99_471126  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -9.2  | 44   | 1.47 | 3.5E-08 |
| k99_1653920 | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -9.3  | 45   | 1.47 | 3.6E-08 |
| k99_1160351 | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -9.3  | 47   | 1.44 | 1.4E-08 |
| k99_944561  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -9.5  | 52   | 1.43 | 4.7E-09 |
| k99_507162  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -9.5  | 287  | 1.03 | 4.1E-17 |
| k99_1482833 | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -9.5  | 54   | 1.44 | 4.9E-09 |
| k99_320317  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -9.6  | 59   | 1.44 | 2.8E-09 |
| k99_363252  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -9.7  | 60   | 1.42 | 1.6E-09 |
| k99_1146912 | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -9.8  | 65   | 1.46 | 3.3E-09 |
| k99_637032  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -9.9  | 133  | 1.38 | 2.0E-10 |
| k99_170404  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -9.9  | 141  | 1.35 | 5.5E-11 |
| k99_297678  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -10.1 | 78   | 1.39 | 1.1E-10 |
| k99_363192  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -10.1 | 79   | 1.39 | 1.2E-10 |
| k99_791278  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -10.1 | 83   | 1.39 | 7.0E-11 |
| k99_955336  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12) | -10.2 | 86   | 1.39 | 5.1E-11 |

|             |                                                                                   |       |     |      |         |
|-------------|-----------------------------------------------------------------------------------|-------|-----|------|---------|
| k99_544392  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12)                  | -10.3 | 94  | 1.38 | 2.2E-11 |
| k99_326552  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12)                  | -10.5 | 110 | 1.37 | 4.4E-12 |
| k99_1308548 | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12)                  | -10.6 | 116 | 1.37 | 4.1E-12 |
| k99_1322437 | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12)                  | -11.0 | 151 | 1.39 | 9.7E-13 |
| k99_996538  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12)                  | -11.4 | 204 | 1.35 | 2.0E-14 |
| k99_582407  | NAD-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.12)                  | -12.3 | 372 | 1.33 | 3.2E-17 |
| K99_1611853 | NADHdehydrogenase[ubiquinone]iron-sulfurprotein3(EC1.6.5.3)(EC1.6.99.3) □         | -2.4  | 45  | 0.95 | 5.3E-02 |
| k99_880684  | NADPH-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.13)                | 7.5   | 19  | 2.24 | 8.1E-03 |
| k99_411491  | NADPH-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.13)                | -2.2  | 797 | 0.59 | 1.9E-03 |
| k99_507351  | NADPH-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.13)                | -2.3  | 619 | 0.58 | 1.0E-03 |
| k99_332802  | NADPH-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.13)                | -2.6  | 388 | 0.53 | 3.0E-05 |
| k99_217934  | NADPH-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.13)                | -7.0  | 9   | 1.93 | 3.9E-03 |
| k99_736719  | NADPH-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.13)                | -7.0  | 9   | 1.89 | 2.8E-03 |
| k99_1317487 | NADPH-dependentglyceraldehyde-3-phosphatedehydrogenase(EC1.2.1.13)                | -7.4  | 47  | 1.43 | 1.0E-05 |
| k99_209932  | Nitrate/nitritetransporter                                                        | 7.2   | 16  | 1.73 | 5.8E-04 |
| k99_1009689 | Nitrate/nitritetransporter                                                        | 7.2   | 15  | 1.88 | 1.9E-03 |
| k99_1497682 | Nitrate/nitritetransporter                                                        | -2.0  | 871 | 0.59 | 5.7E-03 |
| k99_826426  | Nitrate/nitritetransporter                                                        | -3.1  | 88  | 0.83 | 2.2E-03 |
| k99_573228  | Nitrate/nitritetransporter                                                        | -3.7  | 61  | 0.79 | 9.8E-05 |
| k99_810529  | Nitrate/nitritetransporter                                                        | -5.0  | 17  | 1.35 | 3.2E-03 |
| k99_776916  | Nitrate/nitritetransporter                                                        | -5.8  | 44  | 1.29 | 1.6E-04 |
| k99_695745  | Nitrate/nitritetransporter                                                        | -6.7  | 78  | 1.09 | 1.1E-07 |
| k99_1497411 | Nitrate/nitritetransporter                                                        | -6.7  | 8   | 2.01 | 8.4E-03 |
| k99_448633  | Nitrate/nitritetransporter                                                        | -7.3  | 11  | 2.00 | 3.5E-03 |
| k99_1663979 | Nitrate/nitritetransporter                                                        | -7.5  | 47  | 1.35 | 1.6E-06 |
| k99_1070971 | Nitrate/nitritetransporter                                                        | -7.5  | 14  | 1.76 | 4.0E-04 |
| k99_1429185 | Nitrate/nitritetransporter                                                        | -7.6  | 15  | 1.72 | 2.2E-04 |
| k99_195597  | Nitrate/nitritetransporter                                                        | -7.7  | 16  | 1.74 | 2.2E-04 |
| k99_889230  | Nitrate/nitritetransporter                                                        | -8.1  | 21  | 1.63 | 2.2E-05 |
| k99_1696924 | Nitrate/nitritetransporter                                                        | -8.2  | 21  | 1.67 | 3.4E-05 |
| k99_978508  | Nitrate/nitritetransporter                                                        | -8.2  | 22  | 1.60 | 1.1E-05 |
| k99_1210676 | Nitrate/nitritetransporter                                                        | -8.7  | 30  | 1.53 | 9.0E-07 |
| k99_981344  | Nitrate/nitritetransporter                                                        | -8.9  | 34  | 1.55 | 7.0E-07 |
| k99_1070954 | Nitrate/nitritetransporter                                                        | -9.5  | 190 | 1.23 | 5.0E-12 |
| k99_1429158 | Nitrate/nitritetransporter                                                        | -9.5  | 53  | 1.62 | 3.5E-07 |
| k99_848268  | Nitrate/nitritetransporter                                                        | -11.3 | 184 | 1.34 | 3.5E-14 |
| k99_824132  | Nitritereductase[NAD(P)H]largesubunit(EC1.7.1.4)                                  | 7.1   | 15  | 1.87 | 2.0E-03 |
| k99_786441  | Nitritereductase[NAD(P)H]largesubunit(EC1.7.1.4)                                  | 2.3   | 258 | 0.59 | 1.1E-03 |
| k99_473529  | Nitritereductase[NAD(P)H]largesubunit(EC1.7.1.4)                                  | 2.2   | 340 | 0.61 | 3.4E-03 |
| k99_657544  | Nitritereductase[NAD(P)H]largesubunit(EC1.7.1.4)                                  | 2.2   | 324 | 0.56 | 1.4E-03 |
| k99_1685365 | Nitritereductase[NAD(P)H]largesubunit(EC1.7.1.4)                                  | 2.1   | 288 | 0.59 | 4.8E-03 |
| k99_347710  | Nitritereductase[NAD(P)H]largesubunit(EC1.7.1.4)                                  | 2.0   | 810 | 0.57 | 4.0E-03 |
| k99_905809  | Nitritereductase[NAD(P)H]largesubunit(EC1.7.1.4)                                  | 2.0   | 652 | 0.55 | 4.1E-03 |
| k99_820009  | Nitritereductase[NAD(P)H]largesubunit(EC1.7.1.4)                                  | 2.0   | 282 | 0.56 | 4.4E-03 |
| k99_1579731 | Nitritereductase[NAD(P)H]largesubunit(EC1.7.1.4)                                  | -6.8  | 8   | 2.01 | 7.4E-03 |
| k99_1418198 | Nitritereductase[NAD(P)H]largesubunit(EC1.7.1.4)                                  | -6.8  | 8   | 1.97 | 6.1E-03 |
| k99_1282367 | Nitritereductase[NAD(P)H]largesubunit(EC1.7.1.4)                                  | -7.3  | 12  | 1.84 | 1.1E-03 |
| k99_1055237 | Nitritereductase[NAD(P)H]largesubunit(EC1.7.1.4)                                  | -7.4  | 13  | 1.83 | 8.6E-04 |
| k99_319899  | Nitritereductase[NAD(P)H]largesubunit(EC1.7.1.4)                                  | -8.3  | 23  | 1.59 | 8.5E-06 |
| k99_1549895 | Nitritereductase[NAD(P)H]largesubunit(EC1.7.1.4)                                  | -9.5  | 55  | 1.43 | 3.6E-09 |
| k99_706618  | OligopeptideABCtransporter,periplasmicligopeptide-bindingproteinOppA(TC3.A.1.5.1) | 2.3   | 74  | 0.69 | 8.5E-03 |
| k99_359341  | OligopeptideABCtransporter,periplasmicligopeptide-bindingproteinOppA(TC3.A.1.5.1) | -6.0  | 17  | 1.56 | 1.7E-03 |
| k99_623880  | PhosphateABCtransporter,periplasmicphosphate-bindingproteinPstS(TC3.A.1.7.1)      | 6.8   | 11  | 1.80 | 2.3E-03 |
| k99_78634   | PhosphateABCtransporter,periplasmicphosphate-bindingproteinPstS(TC3.A.1.7.1)      | 2.0   | 92  | 0.61 | 9.2E-03 |
| k99_283537  | PhosphateABCtransporter,periplasmicphosphate-bindingproteinPstS(TC3.A.1.7.1)      | -3.2  | 243 | 0.88 | 3.5E-03 |

|             |                                                                               |       |     |      |         |
|-------------|-------------------------------------------------------------------------------|-------|-----|------|---------|
| k99_1064254 | PhosphateABCtransporter,periplasmicphosphate-bindingproteinPstS(TC3.A.1.7.1)  | -3.8  | 101 | 0.72 | 5.9E-06 |
| k99_420377  | PhosphateABCtransporter,periplasmicphosphate-bindingproteinPstS(TC3.A.1.7.1)  | -4.1  | 267 | 0.69 | 2.2E-07 |
| k99_1582675 | PhosphateABCtransporter,periplasmicphosphate-bindingproteinPstS(TC3.A.1.7.1)  | -4.1  | 59  | 1.07 | 2.0E-03 |
| k99_550790  | PhosphateABCtransporter,periplasmicphosphate-bindingproteinPstS(TC3.A.1.7.1)  | -4.5  | 68  | 1.08 | 6.0E-04 |
| k99_1138795 | PhosphateABCtransporter,periplasmicphosphate-bindingproteinPstS(TC3.A.1.7.1)  | -4.9  | 34  | 1.31 | 2.9E-03 |
| k99_1340766 | PhosphateABCtransporter,periplasmicphosphate-bindingproteinPstS(TC3.A.1.7.1)  | -6.8  | 84  | 1.07 | 3.4E-08 |
| k99_1273964 | PhosphateABCtransporter,periplasmicphosphate-bindingproteinPstS(TC3.A.1.7.1)  | -6.8  | 8   | 1.96 | 5.8E-03 |
| k99_645506  | PhosphateABCtransporter,periplasmicphosphate-bindingproteinPstS(TC3.A.1.7.1)  | -7.6  | 14  | 1.96 | 1.7E-03 |
| k99_687885  | PhosphateABCtransporter,periplasmicphosphate-bindingproteinPstS(TC3.A.1.7.1)  | -8.0  | 19  | 1.74 | 1.2E-04 |
| k99_981539  | PhosphateABCtransporter,periplasmicphosphate-bindingproteinPstS(TC3.A.1.7.1)  | -8.9  | 35  | 1.48 | 1.6E-07 |
| k99_1170727 | PhosphateABCtransporter,periplasmicphosphate-bindingproteinPstS(TC3.A.1.7.1)  | -10.3 | 92  | 1.38 | 2.4E-11 |
| K99_1469588 | PhosphonateABCtransporterphosphate-bindingperiplasmiccomponent(TC3.A.1.9.1) □ | 1.5   | 178 | 0.56 | 3.9E-02 |
| k99_165606  | PredictedmaltosetransporterMalT □                                             | 2.3   | 85  | 0.72 | 1.0E-02 |
| k99_643783  | PredictedmaltosetransporterMalT □                                             | -5.2  | 10  | 1.73 | 1.9E-02 |
| k99_167180  | Probablelow-affinityinorganicphosphatetransporter                             | 7.7   | 21  | 1.61 | 6.6E-05 |
| k99_440405  | Probablelow-affinityinorganicphosphatetransporter                             | 6.9   | 13  | 1.74 | 1.1E-03 |
| k99_242582  | Probablelow-affinityinorganicphosphatetransporter                             | 6.3   | 8   | 1.93 | 9.7E-03 |
| k99_167159  | Probablelow-affinityinorganicphosphatetransporter                             | 4.7   | 20  | 1.24 | 2.5E-03 |
| k99_726663  | Probablelow-affinityinorganicphosphatetransporter                             | 4.2   | 61  | 1.19 | 4.4E-03 |
| k99_1318273 | Probablelow-affinityinorganicphosphatetransporter                             | 3.7   | 134 | 0.69 | 3.2E-06 |
| k99_438413  | Probablelow-affinityinorganicphosphatetransporter                             | 3.6   | 76  | 0.76 | 5.6E-05 |
| k99_586480  | Probablelow-affinityinorganicphosphatetransporter                             | 3.6   | 104 | 0.71 | 1.5E-05 |
| k99_1707115 | Probablelow-affinityinorganicphosphatetransporter                             | 3.5   | 208 | 0.66 | 6.0E-06 |
| k99_662613  | Probablelow-affinityinorganicphosphatetransporter                             | 3.4   | 35  | 0.83 | 8.5E-04 |
| k99_502759  | Probablelow-affinityinorganicphosphatetransporter                             | 3.3   | 74  | 0.85 | 1.6E-03 |
| k99_1339418 | Probablelow-affinityinorganicphosphatetransporter                             | 3.0   | 77  | 0.76 | 1.3E-03 |
| k99_660651  | Probablelow-affinityinorganicphosphatetransporter                             | 2.7   | 135 | 0.64 | 4.2E-04 |
| k99_1562834 | Probablelow-affinityinorganicphosphatetransporter                             | 2.7   | 114 | 0.64 | 5.4E-04 |
| k99_1372451 | Probablelow-affinityinorganicphosphatetransporter                             | 2.6   | 185 | 0.73 | 4.1E-03 |
| k99_1366986 | Probablelow-affinityinorganicphosphatetransporter                             | 2.2   | 154 | 0.64 | 5.0E-03 |
| k99_1350897 | Probablelow-affinityinorganicphosphatetransporter                             | -3.1  | 64  | 0.67 | 1.2E-04 |
| k99_760745  | Probablelow-affinityinorganicphosphatetransporter                             | -3.9  | 175 | 0.94 | 8.0E-04 |
| k99_383705  | Probablelow-affinityinorganicphosphatetransporter                             | -4.1  | 49  | 0.93 | 2.2E-04 |
| k99_1567732 | Probablelow-affinityinorganicphosphatetransporter                             | -4.2  | 40  | 1.20 | 4.6E-03 |
| k99_1336467 | Probablelow-affinityinorganicphosphatetransporter                             | -4.3  | 23  | 1.24 | 5.6E-03 |
| k99_184675  | Probablelow-affinityinorganicphosphatetransporter                             | -5.9  | 16  | 1.67 | 4.5E-03 |
| k99_876149  | Probablelow-affinityinorganicphosphatetransporter                             | -6.0  | 137 | 0.76 | 2.2E-12 |
| k99_431126  | Probablelow-affinityinorganicphosphatetransporter                             | -6.0  | 120 | 0.87 | 1.3E-09 |
| k99_111067  | Probablelow-affinityinorganicphosphatetransporter                             | -6.3  | 41  | 1.24 | 1.5E-05 |
| k99_244875  | Probablelow-affinityinorganicphosphatetransporter                             | -6.7  | 8   | 2.02 | 8.9E-03 |
| k99_280596  | Probablelow-affinityinorganicphosphatetransporter                             | -6.9  | 9   | 1.96 | 5.1E-03 |
| k99_1273108 | Probablelow-affinityinorganicphosphatetransporter                             | -7.2  | 10  | 2.03 | 4.7E-03 |
| k99_134396  | Probablelow-affinityinorganicphosphatetransporter                             | -7.7  | 56  | 1.29 | 2.1E-07 |
| k99_1381363 | Probablelow-affinityinorganicphosphatetransporter                             | -9.0  | 37  | 1.57 | 6.8E-07 |
| k99_770721  | Probablelow-affinityinorganicphosphatetransporter                             | -9.3  | 46  | 1.44 | 1.5E-08 |
| k99_284801  | Ribulosebisphosphatecarboxylase(EC4.1.1.39)                                   | 6.0   | 24  | 1.45 | 6.8E-04 |
| k99_1699661 | Ribulosebisphosphatecarboxylase(EC4.1.1.39)                                   | 4.3   | 38  | 1.31 | 9.8E-03 |
| k99_528304  | Ribulosebisphosphatecarboxylase(EC4.1.1.39)                                   | 3.7   | 53  | 0.84 | 2.9E-04 |
| k99_683199  | Ribulosebisphosphatecarboxylase(EC4.1.1.39)                                   | 3.6   | 30  | 1.10 | 9.9E-03 |
| k99_423958  | Ribulosebisphosphatecarboxylase(EC4.1.1.39)                                   | 3.6   | 97  | 1.04 | 6.3E-03 |
| k99_624205  | Ribulosebisphosphatecarboxylase(EC4.1.1.39)                                   | 3.5   | 130 | 0.91 | 1.5E-03 |
| k99_299035  | Ribulosebisphosphatecarboxylase(EC4.1.1.39)                                   | 3.4   | 144 | 0.91 | 2.7E-03 |
| k99_1618664 | Ribulosebisphosphatecarboxylase(EC4.1.1.39)                                   | 3.3   | 216 | 0.65 | 1.7E-05 |
| k99_240543  | Ribulosebisphosphatecarboxylase(EC4.1.1.39)                                   | 3.2   | 40  | 0.93 | 5.3E-03 |
| k99_1543486 | Ribulosebisphosphatecarboxylase(EC4.1.1.39)                                   | 3.2   | 147 | 0.90 | 4.5E-03 |

|             |                                             |      |      |      |         |
|-------------|---------------------------------------------|------|------|------|---------|
| k99_234151  | Ribulosebisphosphatecarboxylase(EC4.1.1.39) | 3.2  | 85   | 0.79 | 9.5E-04 |
| k99_1270081 | Ribulosebisphosphatecarboxylase(EC4.1.1.39) | 3.1  | 40   | 0.87 | 4.2E-03 |
| k99_476405  | Ribulosebisphosphatecarboxylase(EC4.1.1.39) | 3.0  | 100  | 0.79 | 2.3E-03 |
| k99_547199  | Ribulosebisphosphatecarboxylase(EC4.1.1.39) | 3.0  | 282  | 0.75 | 1.2E-03 |
| k99_650425  | Ribulosebisphosphatecarboxylase(EC4.1.1.39) | 2.9  | 43   | 0.88 | 7.9E-03 |
| k99_765462  | Ribulosebisphosphatecarboxylase(EC4.1.1.39) | 2.9  | 164  | 0.55 | 6.0E-06 |
| k99_1451168 | Ribulosebisphosphatecarboxylase(EC4.1.1.39) | 2.9  | 45   | 0.77 | 2.2E-03 |
| k99_486683  | Ribulosebisphosphatecarboxylase(EC4.1.1.39) | 2.7  | 287  | 0.55 | 2.2E-05 |
| k99_312335  | Ribulosebisphosphatecarboxylase(EC4.1.1.39) | 2.7  | 181  | 0.57 | 5.5E-05 |
| k99_686367  | Ribulosebisphosphatecarboxylase(EC4.1.1.39) | 2.6  | 326  | 0.58 | 2.1E-04 |
| k99_1648456 | Ribulosebisphosphatecarboxylase(EC4.1.1.39) | 2.4  | 419  | 0.73 | 9.8E-03 |
| k99_814017  | Ribulosebisphosphatecarboxylase(EC4.1.1.39) | 2.2  | 140  | 0.60 | 3.0E-03 |
| k99_1671610 | Ribulosebisphosphatecarboxylase(EC4.1.1.39) | -1.9 | 400  | 0.58 | 8.5E-03 |
| k99_783087  | Ribulosebisphosphatecarboxylase(EC4.1.1.39) | -2.0 | 826  | 0.51 | 2.1E-03 |
| k99_519042  | Ribulosebisphosphatecarboxylase(EC4.1.1.39) | -2.0 | 415  | 0.54 | 3.6E-03 |
| k99_329596  | Ribulosebisphosphatecarboxylase(EC4.1.1.39) | -2.0 | 1063 | 0.60 | 8.2E-03 |
| k99_414990  | Ribulosebisphosphatecarboxylase(EC4.1.1.39) | -2.0 | 540  | 0.57 | 5.0E-03 |
| k99_167711  | Ribulosebisphosphatecarboxylase(EC4.1.1.39) | -2.2 | 231  | 0.56 | 1.8E-03 |
| k99_34249   | Ribulosebisphosphatecarboxylase(EC4.1.1.39) | -2.2 | 730  | 0.60 | 3.3E-03 |
| k99_398002  | Ribulosebisphosphatecarboxylase(EC4.1.1.39) | -2.2 | 75   | 0.63 | 5.7E-03 |
| k99_1115498 | Ribulosebisphosphatecarboxylase(EC4.1.1.39) | -2.2 | 610  | 0.68 | 9.7E-03 |
| k99_978539  | Ribulosebisphosphatecarboxylase(EC4.1.1.39) | -2.3 | 91   | 0.69 | 9.0E-03 |
| k99_577430  | Ribulosebisphosphatecarboxylase(EC4.1.1.39) | -2.7 | 148  | 0.68 | 1.6E-03 |
| k99_600248  | Ribulosebisphosphatecarboxylase(EC4.1.1.39) | -3.3 | 59   | 0.76 | 3.7E-04 |
| k99_494074  | Ribulosebisphosphatecarboxylase(EC4.1.1.39) | -3.6 | 443  | 0.59 | 7.1E-08 |
| k99_198176  | Ribulosebisphosphatecarboxylase(EC4.1.1.39) | -3.7 | 401  | 0.54 | 7.8E-10 |
| k99_1302772 | Ribulosebisphosphatecarboxylase(EC4.1.1.39) | -3.9 | 30   | 0.89 | 2.6E-04 |
| k99_1108093 | Ribulosebisphosphatecarboxylase(EC4.1.1.39) | -4.1 | 21   | 1.20 | 5.9E-03 |
| k99_325406  | Ribulosebisphosphatecarboxylase(EC4.1.1.39) | -4.2 | 31   | 1.18 | 4.0E-03 |
| k99_356001  | Ribulosebisphosphatecarboxylase(EC4.1.1.39) | -4.5 | 28   | 1.15 | 1.5E-03 |
| k99_580361  | Ribulosebisphosphatecarboxylase(EC4.1.1.39) | -4.6 | 78   | 0.69 | 3.3E-09 |
| k99_1581912 | Ribulosebisphosphatecarboxylase(EC4.1.1.39) | -4.7 | 51   | 0.94 | 2.4E-05 |
| k99_401324  | Ribulosebisphosphatecarboxylase(EC4.1.1.39) | -4.8 | 30   | 1.10 | 2.8E-04 |
| k99_520721  | Ribulosebisphosphatecarboxylase(EC4.1.1.39) | -4.9 | 17   | 1.47 | 7.6E-03 |
| k99_945616  | Ribulosebisphosphatecarboxylase(EC4.1.1.39) | -5.5 | 73   | 0.83 | 6.0E-09 |
| k99_1263963 | Ribulosebisphosphatecarboxylase(EC4.1.1.39) | -5.8 | 15   | 1.56 | 2.8E-03 |
| k99_1285926 | Ribulosebisphosphatecarboxylase(EC4.1.1.39) | -5.8 | 77   | 0.93 | 4.3E-08 |
| k99_987709  | Ribulosebisphosphatecarboxylase(EC4.1.1.39) | -6.5 | 120  | 0.86 | 1.1E-11 |
| k99_1421156 | Ribulosebisphosphatecarboxylase(EC4.1.1.39) | -6.6 | 82   | 1.11 | 2.2E-07 |
| k99_338358  | Ribulosebisphosphatecarboxylase(EC4.1.1.39) | -6.7 | 28   | 1.39 | 4.5E-05 |
| k99_1200730 | Ribulosebisphosphatecarboxylase(EC4.1.1.39) | -6.8 | 8    | 1.93 | 4.6E-03 |
| k99_1666113 | Ribulosebisphosphatecarboxylase(EC4.1.1.39) | -6.9 | 9    | 1.98 | 5.6E-03 |
| k99_387892  | Ribulosebisphosphatecarboxylase(EC4.1.1.39) | -6.9 | 82   | 0.99 | 3.8E-10 |
| k99_157557  | Ribulosebisphosphatecarboxylase(EC4.1.1.39) | -6.9 | 9    | 1.90 | 3.2E-03 |
| k99_1469014 | Ribulosebisphosphatecarboxylase(EC4.1.1.39) | -7.0 | 9    | 1.97 | 4.5E-03 |
| k99_996697  | Ribulosebisphosphatecarboxylase(EC4.1.1.39) | -7.0 | 210  | 0.73 | 1.8E-18 |
| k99_1028131 | Ribulosebisphosphatecarboxylase(EC4.1.1.39) | -7.0 | 34   | 1.40 | 1.9E-05 |
| k99_592139  | Ribulosebisphosphatecarboxylase(EC4.1.1.39) | -7.3 | 12   | 1.82 | 1.0E-03 |
| k99_635728  | Ribulosebisphosphatecarboxylase(EC4.1.1.39) | -7.4 | 13   | 1.79 | 6.4E-04 |
| k99_113554  | Ribulosebisphosphatecarboxylase(EC4.1.1.39) | -7.5 | 13   | 1.77 | 5.1E-04 |
| k99_1693706 | Ribulosebisphosphatecarboxylase(EC4.1.1.39) | -7.6 | 14   | 1.71 | 2.2E-04 |
| k99_815961  | Ribulosebisphosphatecarboxylase(EC4.1.1.39) | -7.8 | 17   | 1.66 | 8.1E-05 |
| k99_1024519 | Ribulosebisphosphatecarboxylase(EC4.1.1.39) | -7.9 | 34   | 1.46 | 3.8E-06 |
| k99_869267  | Ribulosebisphosphatecarboxylase(EC4.1.1.39) | -8.0 | 18   | 1.69 | 7.8E-05 |
| k99_835472  | Ribulosebisphosphatecarboxylase(EC4.1.1.39) | -8.2 | 21   | 1.63 | 2.1E-05 |

|             |                                             |       |      |      |         |
|-------------|---------------------------------------------|-------|------|------|---------|
| k99_704738  | Ribulosebisphosphatecarboxylase(EC4.1.1.39) | -8.4  | 25   | 1.59 | 6.3E-06 |
| k99_838416  | Ribulosebisphosphatecarboxylase(EC4.1.1.39) | -8.5  | 26   | 1.60 | 6.0E-06 |
| k99_915937  | Ribulosebisphosphatecarboxylase(EC4.1.1.39) | -8.5  | 27   | 1.58 | 3.5E-06 |
| k99_277992  | Ribulosebisphosphatecarboxylase(EC4.1.1.39) | -8.6  | 28   | 1.54 | 1.6E-06 |
| k99_539879  | Ribulosebisphosphatecarboxylase(EC4.1.1.39) | -9.0  | 39   | 1.53 | 2.5E-07 |
| k99_1549137 | Ribulosebisphosphatecarboxylase(EC4.1.1.39) | -9.4  | 50   | 1.44 | 7.4E-09 |
| k99_1433728 | Sodium-dependentphosphatetransporter        | 5.7   | 62   | 1.02 | 1.2E-06 |
| k99_147401  | Sodium-dependentphosphatetransporter        | 4.9   | 24   | 1.39 | 4.6E-03 |
| k99_744669  | Sodium-dependentphosphatetransporter        | 3.0   | 134  | 0.92 | 9.7E-03 |
| k99_1312901 | Sodium-dependentphosphatetransporter        | 2.5   | 208  | 0.66 | 2.6E-03 |
| k99_697055  | Sodium-dependentphosphatetransporter        | 2.3   | 202  | 0.65 | 4.2E-03 |
| k99_1441867 | Sodium-dependentphosphatetransporter        | 2.3   | 817  | 0.65 | 4.1E-03 |
| k99_1563371 | Sodium-dependentphosphatetransporter        | 2.2   | 744  | 0.60 | 2.8E-03 |
| k99_620771  | Sodium-dependentphosphatetransporter        | 2.1   | 1074 | 0.55 | 1.6E-03 |
| k99_676591  | Sodium-dependentphosphatetransporter        | 2.1   | 200  | 0.60 | 5.4E-03 |
| k99_841074  | Sodium-dependentphosphatetransporter        | 2.0   | 689  | 0.50 | 1.4E-03 |
| k99_1074647 | Sodium-dependentphosphatetransporter        | 2.0   | 2083 | 0.59 | 7.7E-03 |
| k99_563975  | Sodium-dependentphosphatetransporter        | -2.4  | 65   | 0.72 | 9.4E-03 |
| k99_1331414 | Sodium-dependentphosphatetransporter        | -2.6  | 67   | 0.69 | 2.9E-03 |
| k99_747581  | Sodium-dependentphosphatetransporter        | -2.7  | 332  | 0.69 | 1.7E-03 |
| k99_1249197 | Sodium-dependentphosphatetransporter        | -2.8  | 176  | 0.80 | 4.8E-03 |
| k99_1066039 | Sodium-dependentphosphatetransporter        | -3.1  | 180  | 0.69 | 1.5E-04 |
| k99_149021  | Sodium-dependentphosphatetransporter        | -4.0  | 205  | 1.15 | 5.9E-03 |
| k99_122890  | Sodium-dependentphosphatetransporter        | -4.6  | 85   | 0.88 | 6.6E-06 |
| k99_553736  | Sodium-dependentphosphatetransporter        | -4.7  | 61   | 0.92 | 1.3E-05 |
| k99_1588174 | Sodium-dependentphosphatetransporter        | -6.0  | 18   | 1.61 | 2.3E-03 |
| k99_1038113 | Sodium-dependentphosphatetransporter        | -6.1  | 55   | 1.14 | 3.5E-06 |
| k99_1610728 | Sodium-dependentphosphatetransporter        | -6.2  | 21   | 1.50 | 6.2E-04 |
| k99_323169  | Sodium-dependentphosphatetransporter        | -6.3  | 219  | 0.73 | 3.1E-15 |
| k99_269999  | Sodium-dependentphosphatetransporter        | -6.4  | 46   | 1.21 | 5.3E-06 |
| k99_264199  | Sodium-dependentphosphatetransporter        | -6.5  | 131  | 0.86 | 2.5E-11 |
| k99_1055825 | Sodium-dependentphosphatetransporter        | -6.6  | 50   | 1.19 | 1.8E-06 |
| k99_222532  | Sodium-dependentphosphatetransporter        | -6.6  | 27   | 1.40 | 7.5E-05 |
| k99_849658  | Sodium-dependentphosphatetransporter        | -7.1  | 10   | 1.89 | 2.6E-03 |
| k99_121399  | Sodium-dependentphosphatetransporter        | -7.1  | 118  | 1.07 | 4.3E-09 |
| k99_1119704 | Sodium-dependentphosphatetransporter        | -7.2  | 162  | 0.90 | 6.0E-13 |
| k99_264183  | Sodium-dependentphosphatetransporter        | -7.4  | 87   | 1.09 | 1.9E-09 |
| k99_269451  | Sodium-dependentphosphatetransporter        | -7.5  | 49   | 1.30 | 5.4E-07 |
| k99_675732  | Sodium-dependentphosphatetransporter        | -7.6  | 380  | 0.87 | 2.9E-15 |
| k99_829536  | Sodium-dependentphosphatetransporter        | -8.4  | 25   | 1.56 | 3.5E-06 |
| k99_234445  | Sodium-dependentphosphatetransporter        | -8.6  | 29   | 1.56 | 2.0E-06 |
| k99_1626277 | Sodium-dependentphosphatetransporter        | -8.6  | 29   | 1.54 | 1.4E-06 |
| k99_1309610 | Sodium-dependentphosphatetransporter        | -9.4  | 48   | 1.44 | 9.1E-09 |
| k99_110104  | Sodium-dependentphosphatetransporter        | -9.9  | 68   | 1.40 | 3.9E-10 |
| k99_386179  | Sodium-dependentphosphatetransporter        | -10.0 | 74   | 1.40 | 2.2E-10 |
| k99_13482   | Sodium-dependentphosphatetransporter        | -10.1 | 83   | 1.40 | 1.2E-10 |

Table 5

Differential expression of eukaryote open reading frames (ORFs) using raw counts, normalized with internal standards (applying the *controlGenes* function (*estimatedSizeFactors*) in *DESeq2*), contrasted between timepoints (T2 vs T1) for distinct SEED Rank1/Rank3 annotations. *Log2FoldChange* –  $\log_2$  fold changed between timepoints (in triplicates), *base mean* – mean transcription level at T1 & T2, *lfcSE* –  $\log_2$  fold change standard error, *padj* – adjusted p-values, below threshold <0.01, unless otherwise indicated with  $\square$ .