

| POSITION | POSITION SORT | GENE        | FALSE POSITIVE SCORE | TYPE        | SUBTYPE                        | SIZE | SIZE SORT | POLYMORPH SUMMARY | N | N | N | N | N | N | N | 10_NT_ALIGN | ANNOTATION   | (STRAND)CODON   | GEVO_LINK                  | COGE_ALIGN_LINK            | HOMOPOLYMER FALSE POSITIVE SCORE | MULTI-HIT FALSE POSITIVE SCORE |    |    |
|----------|---------------|-------------|----------------------|-------------|--------------------------------|------|-----------|-------------------|---|---|---|---|---|---|---|-------------|--|---|----------------------------|----------------------------|----------------------------------|--------------------------------|----|----|
|          |               |             |                      |             |                                |      |           |                   | M | M | M | M | M | M | M |             |  |   |                            |                            |                                  |                                | M  | M  |
| 46,171   | 46171         | -           | 0                    | contig join | -                              | -    | -         | -                 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | N           | show   | -   | -                          | GEvo Link<br>GEvo_Link_20k | -                                | 0                              | 0  |    |
| 48,332   | 48332         | araB, b0063 | 6                    | insertion   | Frameshift                     | 1    | 1         | --T----           | - | - | T | - | - | - | - | show        | L-ribulokinase   | show  | GEvo Link<br>GEvo_Link_20k | CoGeAlign Link             | 6                                | 0                              | 0  |    |
| 57,023   | 57023         | b0070, setA | 8                    | indel       | Frameshift                     | 1    | 1         | TT-TTT-           | T | T | - | T | T | T | - | show        | broad specificity sugar efflux system  | show  | GEvo Link<br>GEvo_Link_20k | CoGeAlign Link             | 8                                | 0                              | 0  |    |
| 63,009   | 63009         |             | 8                    | insertion   |                                | 1    | 1         | -----A-           | - | - | - | - | - | A | - | show        | INTERGENIC   |   | GEvo Link<br>GEvo_Link_20k |                            | 8                                | 0                              | 0  |    |
| 63,714   | 63714         |             | 5                    | insertion   |                                | 1    | 1         | -----T-           | - | - | - | - | - | T | - | show        | INTERGENIC   |   | GEvo Link<br>GEvo_Link_20k |                            | 5                                | 0                              | 0  |    |
| 70,349   | 70349         | b0082, mraW | 7                    | insertion   | Frameshift                     | 1    | 1         | ---A---           | - | - | - | A | - | - | - | show        | S-adenosyl-dependent methyltransferase activity on membrane-located substrates, putative apolipoprotein                          | show  | GEvo Link<br>GEvo_Link_20k | CoGeAlign Link             | 7                                | 0                              | 0  |    |
| 105,354  | 105354        | -           | 0                    | contig join | -                              | -    | -         | -                 |   |   |   |   |   |   |   | N           | show   | -   | -                          | GEvo Link<br>GEvo_Link_20k | -                                | 0                              | 0  |    |
| 105,593  | 105593        | aceF, b0115 | 31                   | SNP         | Synonymous                     | 1    | 1         | CCCCCCT           | C | C | C | C | C | C | T | show        | pyruvate dehydrogenase (dihydrolipoyltransacetylase component), pyruvate dehydrogenase, dihydrolipoyltransacetylase component E2 | show  | GEvo Link<br>GEvo_Link_20k | CoGeAlign Link             | 0                                | 0                              | 31 |    |
| 105,597  | 105597        | aceF, b0115 | 31                   | SNP         | Nonsynonymous Amino acids: I V | 1    | 1         | AAAAAAG           | A | A | A | A | A | A | G | show        | pyruvate dehydrogenase (dihydrolipoyltransacetylase component), pyruvate dehydrogenase, dihydrolipoyltransacetylase component E2 | ! (1):ATC CTG GTG AAA GTT (1):ATC CTG GTG aAA GTT (1):ATC CTG GTG AAa GTT (1):GTG ATG GTG aaa GTg | show                       | GEvo Link<br>GEvo_Link_20k | CoGeAlign Link                   | 0                              | 0  | 31 |
| 105,599  | 105599        | aceF, b0115 | 31                   | SNP         | Nonsynonymous Amino acids: I V | 1    | 1         | CCCCCCG           | C | C | C | C | C | C | G | show        | pyruvate dehydrogenase (dihydrolipoyltransacetylase component), pyruvate dehydrogenase, dihydrolipoyltransacetylase component E2 | show  | GEvo Link<br>GEvo_Link_20k | CoGeAlign Link             | 0                                | 0                              | 31 |    |
| 105,600  | 105600        | aceF, b0115 | 31                   | SNP         | Nonsynonymous Amino acids: L M | 1    | 1         | CCCCCCA           | C | C | C | C | C | C | A | show        | pyruvate dehydrogenase (dihydrolipoyltransacetylase component), pyruvate dehydrogenase, dihydrolipoyltransacetylase component E2 | ! (1):CTG GTG AAA GTT GGC (1):CTG GTG aAA GTT gGC (1):CTG GTG AAa GTT GGC (1):ATG GTG aaa GTg ggC | show                       | GEvo Link<br>GEvo_Link_20k | CoGeAlign Link                   | 0                              | 0  | 31 |
| 105,611  | 105611        | aceF, b0115 | 31                   | SNP         | Synonymous                     | 1    | 1         | TTTTTTG           | T | T | T | T | T | T | G | show        | pyruvate dehydrogenase (dihydrolipoyltransacetylase component), pyruvate dehydrogenase, dihydrolipoyltransacetylase component E2 | show  | GEvo Link<br>GEvo_Link_20k | CoGeAlign Link             | 0                                | 0                              | 31 |    |
| 105,682  | 105682        | -           | 0                    | contig join | -                              | -    | -         | -                 |   |   |   | N | N |   |   | N           | show   | -   | -                          | GEvo Link<br>GEvo_Link_20k | -                                | 0                              | 0  |    |