piece 1, NC_000913, zipA_cysZ-, config: linear, direction: -, begin: 2529514, end: 2529236

```
          *2529510  *        *2529500  *        *2529490  *        *2529480  *        *2529470  *        *2529460  *        *2529450  *        *2529440  *
5' g c g t g g g g c a g a t g t g a a t g a t g a a a c c a t a a t c a g g a t g a g c t c c t t t t g a c c a a t c c c a g g a a a a t t c t g c g t a t t t a 3'
   - ala - trp - gly - arg - cys - glu -   -     -     -     -     -     -     -     -     -     - -fMet - thr - asn - pro - arg - lys - ile - leu - arg - ile - leu -
   -     - arg - gly - ala - asp - val - asn - asp - glu - thr - ile - ile - arg - met - ser - ser - phe -   -     -     -     -     -     -     -     -     -     -
   -     - val - gly - gln - met -   - -fMet - met - lys - pro -   -     -     -     -     -     -     -
... -----------------------------------------------------------] NC_000913.cysZ                                    ir zipA_cysZ-
```

sd

p35   5.0 bits

p10   5.2 bits

{-----------------------------} sd-(12)-ir 2529466 Gap 4.0 bits
|-----------------------------| sd-ir 2529466 zipA_cysZ- total 5.2 bits

{---} p35-(26)-p10 2529439 Gap 3.7 bits
|---| p35-p10 2529439 total 6.5 bits

```
          *2529430  *        *2529420  *        *2529410  *        *2529400  *        *2529390  *        *2529380  *        *2529370  *        *2529360  *
5' c c g g g t a a t t g c g c a a t g g a c a g t t a g g a t a t g t t c g a a a a a c a g c a a a a a g c a c g a t t t c a t c t a t c t t t g c t g t g a 3'
   - pro - gly - asn - cys - ala - met - asp - ser -   -     - -fMet - phe - glu - lys - thr - ala - lys - ser - thr - ile - ser - ser - ile - phe - val - leu -   -
   -     -     -     -     -     -     - -fMet - arg - asn - gly - gln - leu - gly - tyr - val - arg - lys - asn - ser - lys - lys - his - asp - phe - ile - tyr - leu - cys - ala - val - lys -
... -------------------------------------------- sd                    [###> orf 20 codons                                                     [###> orf 17 codons
```

ir zipA_cysZ-

{-----------------} sd-(11)-ir 2529418 Gap 3.0 bits
|-----------------| sd-ir 2529418 zipA_cysZ- total 8.4 bits

sd   ir zipA_cysZ-

{------------------} sd-(12)-ir 2529403 Gap 4.0 bits
|------------------| sd-ir 2529403 zipA_cysZ- total 6.3 bits

p35   2.8 bits   p10   4.6 bits

{---------------------------} p35-(21)-p10 2529403 Gap 3.3 bits
|---------------------------| p35-p10 2529403 total 4.1 bits

```
          *2529350  *        *2529340  *        *2529330  *        *2529320  *        *2529310  *        *2529300  *        *2529290  *        *2529280  *
5' a a g t t a a t a g t g c a c t t g c a c t t g g t a a t c g g c a a a t a c t c t t a g t g a g t a a a g t t t g c c g t g g t g g c a a g g t g t t a g 3'
   -     -     -     - -fMet - his - leu - his - leu - arg -   -     -     -     -     -     -     - -fMet - phe - ala - val - val - ala - arg - cys -   -
   - ser -   -     -     -     -     -     -     -     -     -     -     -     -     - -fMet - ser - lys - cys - leu - pro - trp - trp - gln - gly - val - arg -
   - val - asn - ser - ala - leu - ala - leu - glu - val - ile - gly - lys - tyr - ser -   -     -     -     -     -     -     -     -     -     -     - -fMet - leu - glu -
```

p35   4.7 bits   p10   3.5 bits   ... sd

{-------------------------} p35-(21)-p10 2529315 Gap 3.3 bits   ... sd

|---| p35-p10 2529315 total 4.8 bits

p35   4.0 bits

p10   4.5 bits

{-------------------------------------} ... p35-(23)-p10 2529261 Gap

{-------------------------------} p35-(23)-p10 2529313 Gap 1.4 bits
|-------------------------------| p35-p10 2529313 total 7.7 bits |--------------- ... p35-p10 2529261 total 4.8

                                                                                  {------------------ ... p35-(26)-p10 2529258 Gap
                                                                                  |------------------ ... p35-p10 2529258 total 8.6

```
        *2529270   *          *2529260   *         *2529250   *          *2529240
5'  a a c a a c a g a g a a t a t a a t g a t g c a g g a t t t g c g t c t  3'
      -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -
      - thr - thr - glu - asn - ile - met - met - gln - asp - leu - arg -
          - gln - gln - arg - ile -  ●       ●    -   -   -   -   -   -
```

... sd   [------------------------------------ ... NC_000913.zipA

... sd   ir zipA_cysZ-

                                                                  ir zipA_cysZ-

... -------------------} p35-(23)-p10 2529261 Gap 1.4 bits
... -------------------| p35-p10 2529261 total 4.8 bits
... ------------------------} p35-(26)-p10 2529258 Gap 3.7 bits
... ------------------------| p35-p10 2529258 total 8.6 bits
         {---------------------} sd-(9)-ir 2529255 Gap 2.3 bits
         |---------------------| sd-ir 2529255 zipA_cysZ- total 8.7 bits
            {------------------} sd-(10)-ir 2529252 Gap 2.7 bits
            |------------------| sd-ir 2529252 zipA_cysZ- total 6.2 bits

                              p10 2.2 bits

                              p10 8.4 bits