piece 1, NC_000913, ylcE_appY-, config: linear, direction: -, begin: 582933, end: 582339

```
        *582930    *        *582920    *        *582910    *        *582900    *        *582890    *        *582880    *        *582870    *        *582860    *
5' g a t g a a a a c t a c g g a g c a a a c a t a a t c c a t c t t g c a c c t a t c a t a a a a t t a a a a c a a g t t g a t a g t a g t c a a a t a a c a a c c 3'
   - asp - glu - asn - tyr - gly - ala - asn - ile - ile - his - leu - ala - pro - ile - ile - lys - leu - lys - gln - val - asp - ser - ser - gln - ile - thr - thr -
   - met - lys - thr - thr - glu - gln - thr - ile - ile - his - leu - ala - pro - ile - ile - lys - leu - lys - gln - val - asp - ser - ser - gln - ile - thr - thr -
                            - -fMet - his - leu - ser -                   -fMet - ile - val - val - lys -
```

... ---] NC_000913.appY

p10   0.9 bits

p35   4.7 bits

p35   5.6 bits
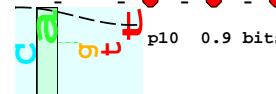
{-------------------} p35-(23)-p10 582878 Gap 1.4 bits
|-------------------| p35-p10 582878 total 4.1 bits

{-------------- ... p35-(25)-p10 582849 Gap
|-------------- ... p35-p10 582849 total 5.3

```
        *582850    *        *582840    *        *582830    *        *582820    *        *582810    *        *582800    *        *582790    *        *582780    *
5' a a t t a a a t a c a c a a t c a t a a t c a g g a t g a t g t g c a t t t a t a t t t t t a t a c a c a a a t t a t a g t t t g c a a a t t t t a a t a a a t 3'
   - asn -                                        -fMet - his - leu - tyr - phe - tyr - thr - gln - asn - tyr - ser - leu - gln - ile - leu - ile - asn -
                                        -fMet - met - cys - ile - tyr - ile - phe - ile - his - lys - ile - ile - val - cys - lys - phe -
```

p10   3.7 bits

ir ylcE_appY-

p10   5.9 bits

[###> orf 16 codons

sd

p35   4.7 bits

p10   3.4 bits

... p10
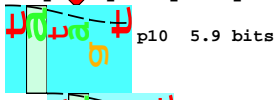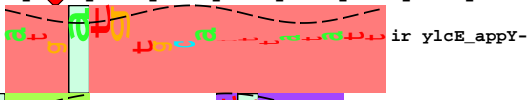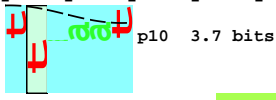
p10   2.8 bits
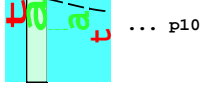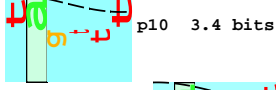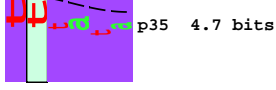
{-------} sd-(4)-ir 582824 Gap 9.3 bits
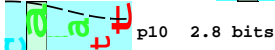
|-------| sd-ir 582824 ylcE_appY- total 6.8 bits

p35   1.6 bits

p35   5.7 bits
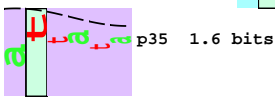
... -------} p35-(25)-p10 582849 Gap 4.0 bits
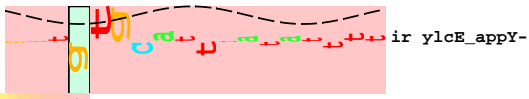
ir ylcE_appY-

{-------------------------} p35-(21)-p10 582775 Gap 3.3 bits

... ------| p35-p10 582849 total 5.3 bits

{-------} sd-(6)-ir 582822 Gap 4.3 bits

|-----------------------------------| p35-p10 582775 total 4.0 bits

|-----------| sd-ir 582822 ylcE_appY- total 7.6 bits

p35   6.1 bits

{-------------------------} p35-(22)-p10 582794 Gap 2.3 bits
|-------------------------| p35-p10 582794 total 8.2 bits
{-------------------------} p35-(24)-p10 582792 Gap 2.4 bits
|-------------------------| p35-p10 582792 total 5.7 bits

p35   4.7 bits

{-------------------------- ... p35-(24)-p10 582764 Gap

{-------------------------} p35-(23)-p10 582785 Gap 1.4 bits
|-------------------------| p35-p10 582785 total 6.1 bits

|-------------------------- ... p35-p10 582764 total 9.3
{------------------- ... p35-(21)-p10 582759 Gap
|------------------- ... p35-p10 582759 total 6.1
{------------------- ... p35-(22)-p10 582758 Gap
|------------------- ... p35-p10 582758 total 9.1
{------------------- ... p35-(24)-p10 582756 Gap
|------------------- ... p35-p10 582756 total 6.5

p35   1.8 bits

{------------------- ... p35-(26)-p10 582753 Gap

|--------------- ... p35-p10 582753 total 5.2

```
      *582770     *        *582760      *        *582750      *        *582740      *        *582730      *        *582720      *        *582710      *        *582700      *
5' ttcattttaagattaaattattatatgtatgttgtttttttattctaacttatttcaaagttacattttcaacgcttactat 3'
   - phe - ile -        -        -        -        -        -fMet - leu - phe - phe - ile - leu - thr - tyr - phe - lys - val - thr - phe - phe - asn - ala - tyr - tyr -
                 -        -        -        -        -        -fMet - tyr - val - val - phe - tyr - ser - asn - leu - phe - gln - ser - tyr - ile - phe - gln - arg - leu - leu - cys -
```

[###> orf 20 codons

p10 7.1 bits
p10 6.0 bits
p10 2.2 bits
p10 0.5 bits

... p10 5.7 bits
p10 3.7 bits
p10 4.6 bits
p10 1.7 bits
p10 5.6 bits

p10 5.7 bits
p35 4.8 bits
p10 5.1 bits
p35 1.5 bits

p10 5.7 bits
{---------------------------------------} p35-(23)-p10 582717 Gap 1.4 bits
{-------------- ... p35-(21)-p10 582675 Gap

p10 3.3 bits
|---| p35-p10 582717 total 5.6 bits
|-------------- ... p35-p10 582675 total 4.7

p35 4.7 bits
p35 4.8 bits
p35 5.2 bits
p35 5.2 bits

{--} p35-(22)-p10 582744 Gap 2.3 bits
|---| p35-p10 582744 total 6.9 bits
{--} p35-(23)-p10 582697 Gap 1.4 bits
|---| p35-p10 582697 total 4.2 bits

p35 1.7 bits
{---} p35-(23)-p10 582712 Gap 1.4 bits

{-------------------------------------} p35-(23)-p10 582732 Gap 1.4 bits
|---------------------------------------| p35-p10 582732 total 6.3 bits
{---------------------------------- ... p35-(25)-p10 582680 Gap

... {-------------} p35-(24)-p10 582764 Gap 2.4 bits
|-------------------------------------| p35-p10 582712 total 5.0 bits
|--------------------------------- ... p35-p10 582680 total 6.8

p35 4.8 bits
{---} p35-(25)-p10 582695 Gap 4.0 bits

{---} p35-(23)-p10 582711 Gap 1.4 bits
|---| p35-p10 582711 total 8.4 bits

... |--------------| p35-p10 582764 total 9.3 bits
... {-------------} p35-(21)-p10 582759 Gap 3.3 bits
... |--------------| p35-p10 582759 total 6.1 bits
... {-------------} p35-(22)-p10 582758 Gap 2.3 bits
... |--------------| p35-p10 582758 total 9.1 bits
... {-------------} p35-(24)-p10 582756 Gap 2.4 bits
... |--------------| p35-p10 582756 total 6.5 bits
|---| p35-p10 582695 total 6.8 bits

... {----------------------} p35-(26)-p10 582753 Gap 3.7 bits
... |----------------------| p35-p10 582753 total 5.2 bits

```
      *582690     *        *582680      *        *582670      *        *582660      *        *582650      *        *582640      *        *582630      *        *582620      *        *582610
5' gctttttattaacataaactcactacaacgcacctgaaacctcttgctatatatatgtcaacggtttgaatttaaaataaa 3'
   - ala - phe - tyr -        -        -        -        -        -fMet - ser - thr - val -        -        -        -        -        -        -        -
   - leu - phe - ile - asn - ile - asn - ser - leu - gln - arg - thr -        -        -        -fMet - leu - tyr - ile - cys - gln - pro - phe - glu - phe - lys - ile - lys -
          - phe - leu - leu - thr -        -        -        -        -        -        -        -        -        -        -        -        -fMet - asn - leu - lys -        -        -
```

p10 5.6 bits
p35 5.2 bits
p10 2.7 bits

p10 6.5 bits
{--------------------------------} p35-(22)-p10 582624 Gap 2.3 bits

|-----------------------------------| p35-p10 582624 total 5.6 bits

... }⟩ p35-(21)-p10 582675 Gap 3.3 bits

p35 0.6 bits

p10 7.6 bits

... ------------------------| p35-p10 582675 total 4.7 bits

{--} p35-(23)-p10 582617 Gap 1.4 bits

|---------------------------------------| p35-p10 582617 total 6.8 bits

p35 6.5 bits

... p35-(21)-p10 582603 Gap

... p35-p10 582603 total 9.6

... p35-(24)-p10 582600 Gap

... p35-p10 582600 total 6.4

p35 5.6 bits

... p35-(23)-p10 582596 Gap

... p35-p10 582596 total 7.5

... }⟩ p35-(25)-p10 582680 Gap 4.0 bits

... ------------------| p35-p10 582680 total 6.8 bits

```
           *         *582600   *         *582590   *         *582580   *         *582570   *         *582560   *         *582550   *         *582540   *         *582530
5'  a a g a g t a t c a t t t t t a c t t g c a t t t c t t a t c a a g t c a c a t t c a a c a a c a g t a a a a a a a c a t t a t t a g a a c c a t t c a a t t a a  3'
      - arg - val - ser - phe - leu - leu - ala - phe - leu - ile - lys - ser - his - ser - thr - thr - val - lys - lys - his - tyr -  ●  -   -   -   -   -   -   -
                                             -fMet - his - phe - leu - ser - ser - his - ile - gln - gln - gln -  ●  -   -   -   -   -   -   -   -   -   -   -   -
```

p10 6.3 bits

p10 2.2 bits

p10 2.3 bits

p10 3.4 bits

p35 5.7 bits

{---------------------------------} p35-(23)-p10 582573 Gap 1.4 bits

|---------------------------------| p35-p10 582573 total 6.4 bits

... }⟩ p35-(21)-p10 582603 Gap 3.3 bits

... ------------| p35-p10 582603 total 9.6 bits

... }⟩ p35-(24)-p10 582600 Gap 2.4 bits

... ------------| p35-p10 582600 total 6.4 bits

... }⟩ p35-(23)-p10 582596 Gap 1.4 bits

... ------------| p35-p10 582596 total 7.5 bits

```
           *         *582520   *         *582510   *         *582500   *         *582490   *         *582480   *         *582470   *         *582460   *         *582450
5'  c a a a a a a c c a a c a t c c a g c t t g c t t a a t t t t t c t t t a t t a a a c g a t a t t g a a a t c a a t t g a t a a a a t a c a t c t a a a c a a c  3'
      -   -   -   -   -   - -fMet - leu - asn - phe - ser - leu - leu - asn - asp - ile - glu - asn - gln - leu - ile - lys - tyr - ile -  ●  -   -   -   -   -   -
                                                                                    ●                    -fMet - lys - ile - asn -  ●  -   -   -   -   -   -   -
```

p35 5.3 bits

p10 2.4 bits

p10 7.6 bits

{--} p35-(24)-p10 582484 Gap 2.4 bits

|---------------------------------------| p35-p10 582484 total 5.4 bits

p35 4.8 bits

p10 3.6 bits

{--} p35-(21)-p10 582478 Gap 3.3 bits

|---------------------------------------| p35-p10 582478 total 5.0 bits

p35 2.5 bits

p35-(26)-p10 582465 Gap 3.7 bits
p35-p10 582465 total 6.4 bits

```
        *      *582440      *       *582430      *       *582420      *       *582410      *       *582400      *       *582390      *       *582380      *       *582370
5' c t t t t g g g g c g c a a a a g c a t a a c a t c a a a c a a a c a a a t a a c a c a c c g a a a a a a c t c a c a a t t a a t a a c c t a t g a t a t a c a t 3'
    -      -fMet - gly - arg - lys - ser - ile - thr - ser - asn - lys - gln - ile - thr - his - arg - lys - asn - ser - gln - leu - ile - thr - tyr - asp - ile - his -
    -      -    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -   -fMet - ile - tyr - ile -

        *      *582360      *       *582350      *       *582340
5' a c t g t t t a t t a t g g t t g a a t a a g c c a c t 3'
    - thr - val - tyr - tyr - gly -    -    -    -    -    -
    - leu - phe - ile - met - val - glu -    -    -    -    -
    -    -    -    -   -fMet - asn - lys - pro -
```