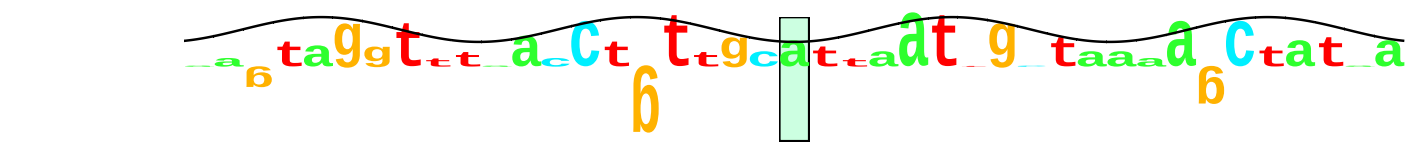
grxA*, config: linear, direction: +, begin: 889869, end: 890239

```
     *889870   *         *889880   *         *889890   *         *889900   *         *889910   *         *889920
 5′ t a c a t a c t g a t a c t g a a a a t c a t c g c g t t c a t t g c t c a a t t t c t c a g c c a g a t 3′
... ---------------------------------------------------------------------------------------------------- ... grxA

        *         *889930   *         *889940   *         *889950   *         *889960   *         *889970
 5′ c t t t t g c a c g c a c a c a g t a a g g g c a a c c c g a a c g a c c a a a a a t a a c g g t t t g c 3′
... ---------------------------------------------------------------------------------------------------- ... grxA

   *         *889980   *         *889990   *         *890000   *         *890010   *         *890020   *
 5′ a t t a t t t c t c t c c t c a t a g a t t t a t g c c t g t a a t g a t c a c g c t a a a a t g t a t t 3′
... --] grxA

     *890030   *         *890040   *         *890050   *         *890060   *         *890070   *         *890080
 5′ c g c t g a a a g t a g g t t t a a c c t g t t g c a t t a a t t g c t a a a a g c t a t a a c t g t t a 3′
```

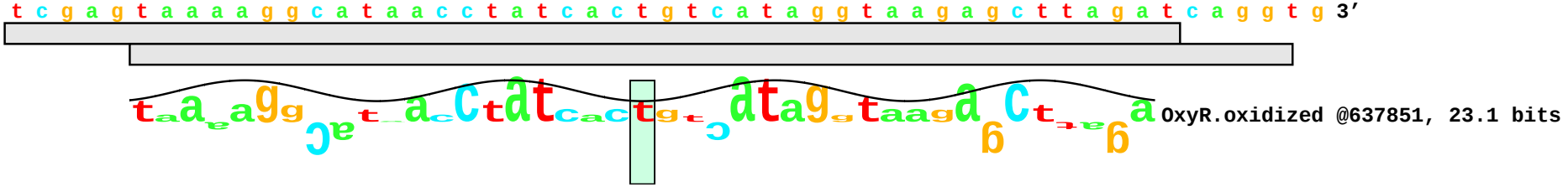


OxyR.oxidized @890054, 26.0 bits

```
        *         *890090   *         *890100   *         *890110   *         *890120   *         *890130
 5′ a a c a c a a t a c a g t g a a a a g t t t t a g a c t g a a g g c t c a c t t t g c a g a g g g a a g c 3′


   *         *890140   *         *890150   *         *890160   *         *890170   *         *890180   *
 5′ g t a t g c g c g c g a t c g g t a a a t t g c c t a a a g g c g t g t t g a t a c t g g a a t t t a t c 3′
      [---------------------------------------------------------------------------------------------------- ... ybjC

       *890190   *         *890200   *         *890210   *         *890220   *         *890230   *
 5′ g g a a t g a t g c t a c t g g c g g t g g c g c t g c t g t c g g t a a g c g a c t c c c t g t c g c t 3′
... ---------------------------------------------------------------------------------------------------- ... ybjC
```

dsbG*, config: linear, direction: +, begin: 637667, end: 638037

```
         *637670   *         *637680   *         *637690   *         *637700   *         *637710   *
 5′ t t c c t c c g g g g g c a t c g a a t g t t t t g a t g a t t g t a a t g c c c t g t t t t t c a a t c 3′
... ---------------------------------------------------------------------------------------------------- ... dsbG

    *637720   *         *637730   *         *637740   *         *637750   *         *637760   *         *637770
 5′ g c t t t t a c t g g a g c a g g a a g t t c c t c t g c g a a g g c g a t t g c a g g a a g c a g a g c 3′
... ---------------------------------------------------------------------------------------------------- ... dsbG

       *         *637780   *         *637790   *         *637800   *         *637810   *         *637820   *
 5′ c a g t a a a a g t a t c t t t t t t a a c a t t a a t t t g t c c t t t t c a g t c a g t g c a a a a g 3′
... ---------------------------------------------] dsbG

          *637830   *         *637840   *         *637850   *         *637860   *         *637870   *
 5′ t c g a g t a a a a g g c a t a a c c t a t c a c t g t c a t a g g t a a g a g c t t a g a t c a g g t g 3′
```

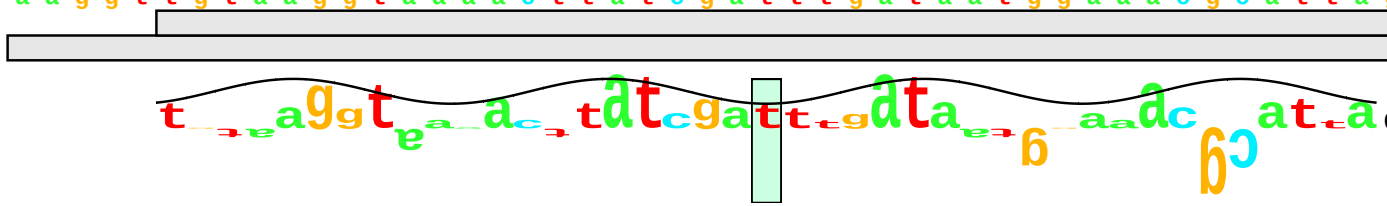


OxyR.oxidized @637851, 23.1 bits

```
      *637880   *         *637890   *         *637900   *         *637910   *         *637920   *         *637930
 5′ a t t g c c c t t t g t t t a t g a g g g t g t t g t a a t c c a t g t c g t t g t t g c a t t t g t a a 3′


         *         *637940   *         *637950   *         *637960   *         *637970   *         *637980
 5′ g g g c a a c a c c t c a g c c t g c a g g c a g g c a c t g a a g a t a c c a a a g g g t a g t t c a g 3′

    *         *637990   *         *638000   *         *638010   *         *638020   *         *638030   *
 5′ a t t a c a c g g t c a c c t g g a a a g g g g g c c a t t t t a c t t t t t t a t c g c c g c t g g c g g 3′
```

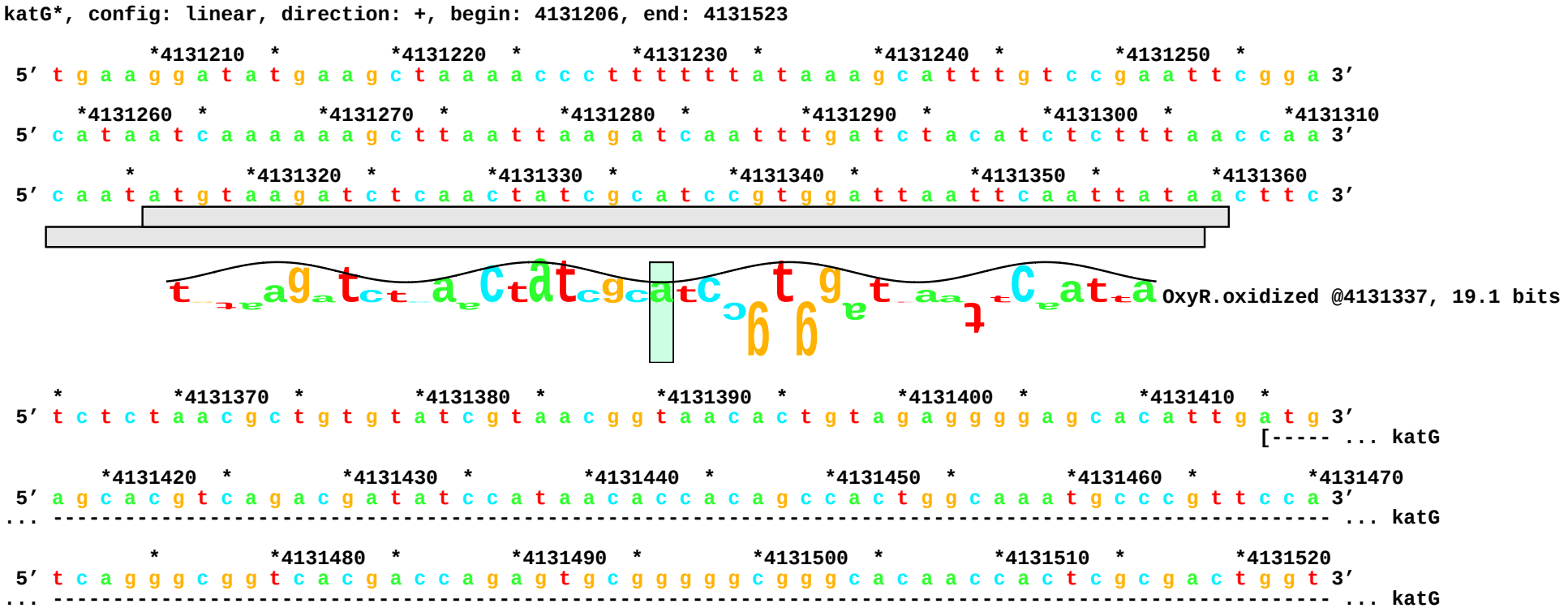
ahpC*, config: linear, direction: +, begin: 637958, end: 638275

```
       *637960   *         *637970   *         *637980   *         *637990   *         *638000   *         *638010
 5' c a c t g a a g a t a c c a a a g g g t a g t t c a g a t t a c a c g g t c a c c t g g a a a g g g g g c 3'

          *         *638020   *         *638030   *         *638040   *         *638050   *         *638060
 5' c a t t t t a c t t t t t t a t c g c c g c t g g c g g t g c a a a g t t c a c a a a g t t g t c t t a c g 3'

     *         *638070   *         *638080   *         *638090   *         *638100   *         *638110   *
 5' a a g g t t g t a a g g t a a a a c t t a t c g a t t t g a t a a t g g a a a c g c a t t a g c c g a a t 3'
```



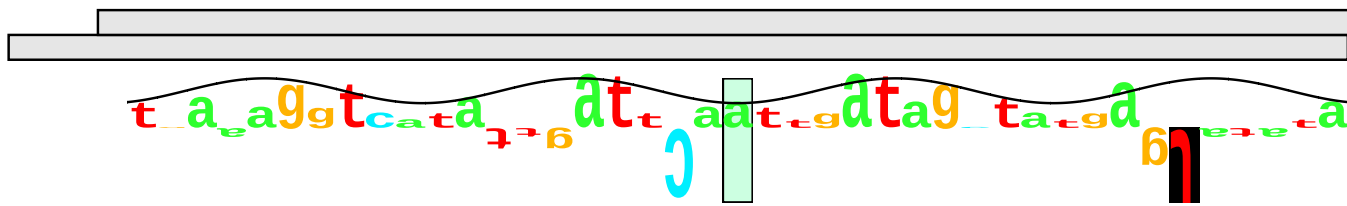
OxyR.oxidized @638089, 19.5 bits

```
       *638120   *         *638130   *         *638140   *         *638150   *         *638160   *
 5' c g g c a a a a a t t g g t t a c c t t a c a t c t c a t c g a a a a c a c g g a g g a a g t a t a g a t 3'
                                                                                                  [--- ... ahpC
    *638170   *         *638180   *         *638190   *         *638200   *         *638210   *         *638220
 5' g t c c t t g a t t a a c a c c a a a a t t a a a c c t t t t a a a a a a c c a g g c a t t c a a a a a c g 3'
... ---------------------------------------------------------------------------------------------------- ... ahpC

       *         *638230   *         *638240   *         *638250   *         *638260   *         *638270   *
 5' g c g a a t t c a t c g a a a t c a c c g a a a a a g a t a c c g a a g g c c g c t g g a g c g t c t t c 3'
... ---------------------------------------------------------------------------------------------------- ... ahpC
```


katG*, config: linear, direction: +, begin: 4131206, end: 4131523
*4131210 * *4131220 * *4131230 * *4131240 * *4131250 *
5′ t g a a g g a t a t g a a g c t a a a a c c c t t t t t t a t a a a g c a t t t g t c c g a a t t c g g a 3′
*4131260 * *4131270 * *4131280 * *4131290 * *4131300 * *4131310
5′ c a t a a t c a a a a a a g c t t a a t t a a g a t c a a t t t g a t c t a c a t c t c t t t a a c c a a 3′
* *4131320 * *4131330 * *4131340 * *4131350 * *4131360
5′ c a a t a t g t a a g a t c t c a a c t a t c g c a t c c g t g g a t t a a t t c a a t t a t a a c t t c 3′
OxyR.oxidized @4131337, 19.1 bits
* *4131370 * *4131380 * *4131390 * *4131400 * *4131410 *
5′ t c t c t a a c g c t g t g t a t c g t a a c g g t a a c a c t g t a g a g g g g a g c a c a t t g a t g 3′
[----- ... katG
*4131420 * *4131430 * *4131440 * *4131450 * *4131460 * *4131470
5′ a g c a c g t c a g a c g a t a t c c a t a a c a c c a c a g c c a c t g g c a a a t g c c c g t t c c a 3′
... ---------- ... katG
* *4131480 * *4131490 * *4131500 * *4131510 * *4131520
5′ t c a g g g c g g t c a c g a c c a g a g t g c g g g g g c g g g c a c a a c c a c t c g c g a c t g g t 3′
... ---------- ... katG

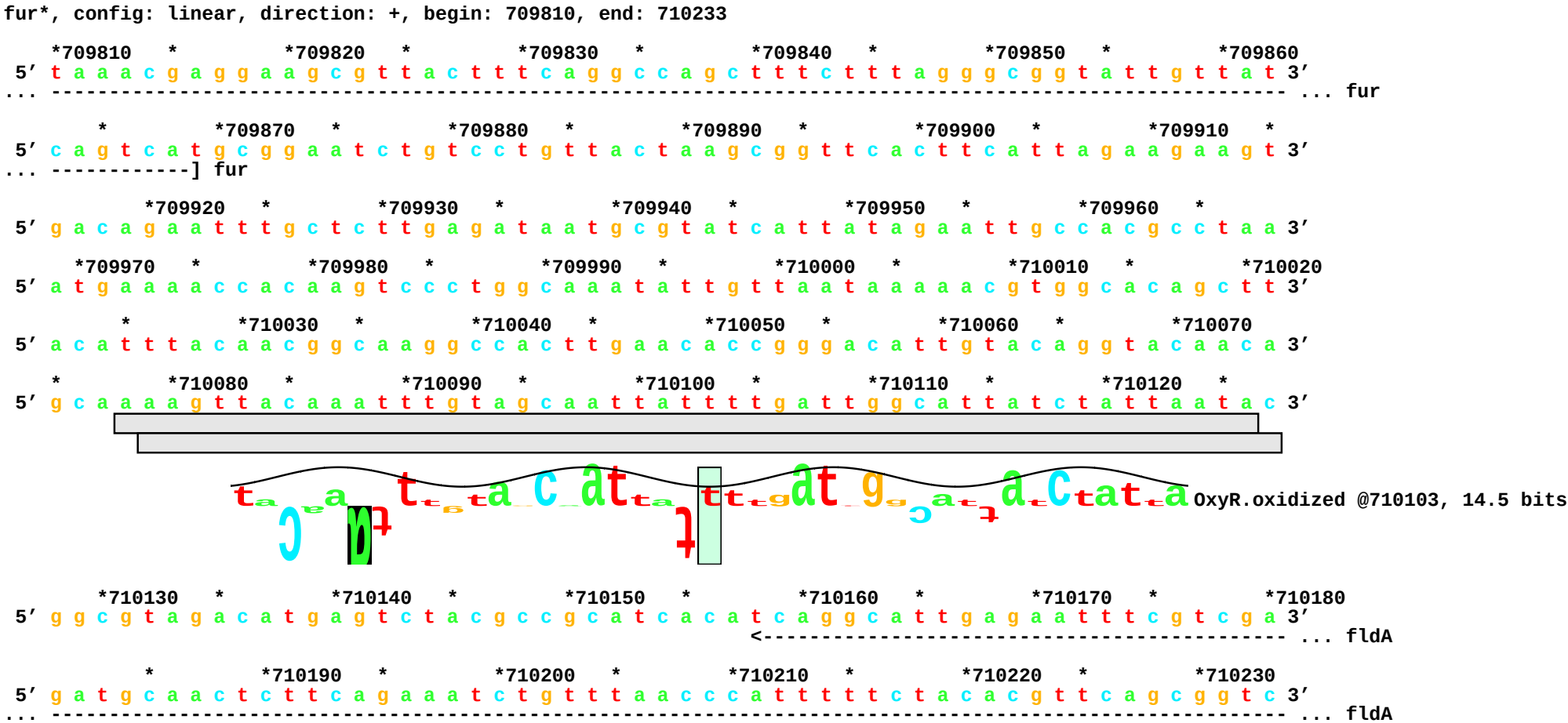
yfdI*, config: linear, direction: +, begin: 2467203, end: 2467520

```
       *         *2467210  *         *2467220  *         *2467230  *         *2467240  *         *2467250  *
 5′ g c g c c t t a t c t a a a a a c a t a a t g a t g t t a a a t a c a t c t g a t t t c g g a a g a g c c 3′
... ---------------------------------------------------------------------------------------------------- ... yfdI

           *2467260  *         *2467270  *         *2467280  *         *2467290  *         *2467300  *
 5′ a t t a a g c c a t t a a t t g a a g a c a t a c c a g c a t t t a c a t a t g a c t t a c c t t t a t t 3′
... ---------------------------------------------------------------------------------------------------- ... yfdI

      *2467310  *         *2467320  *         *2467330  *         *2467340  *         *2467350  *         *2467360
 5′ g t a t a a a t t g a a a g g t c a t a t t g a t t c a a t t g a t a g c t a t g a g t a t a t a a g t t 3′
... ---------------------------------------------------------------------------------------------------- ... yfdI
```



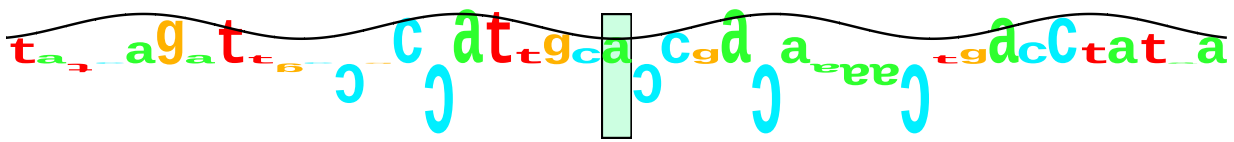
OxyR.oxidized @2467337, 16.0 bit

```
        *         *2467370  *         *2467380  *         *2467390  *         *2467400  *         *2467410
 5′ c a t a t a g t t a t a t t t t g t a t a c a t a c g t c c t g t t t a t t a g c a t t t t t a c t g a a 3′
... ---------------------------------------------------------------------------------------------------- ... yfdI

    *         *2467420  *         *2467430  *         *2467440  *         *2467450  *         *2467460  *
 5′ t a t c t t g a t g c t a g g g t g t t a t c g t t a t t t c t a a a a g t a a t a t a t a t t t a t t c 3′
... ---------------------------------------------------------------------------------------------------- ... yfdI

       *2467470  *         *2467480  *         *2467490  *         *2467500  *         *2467510  *         *2467520
 5′ a t t a t a t g c g a t a t t t a c t t c a t a t a t a a a a a c a g a a a g g t a t g t a a c t t t a t 3′
... ---------------------------------------------------------------------------------------------------- ... yfdI
```


fur*, config: linear, direction: +, begin: 709810, end: 710233
*709810 * *709820 * *709830 * *709840 * *709850 * *709860
5′ t a a a c g a g g a a g c g t t a c t t t c a g g c c a g c t t t c t t t a g g g c g g t a t t g t t a t 3′
... ---------- ... fur
* *709870 * *709880 * *709890 * *709900 * *709910 *
5′ c a g t c a t g c g g a a t c t g t c c t g t t a c t a a g c g g t t c a c t t c a t t a g a a g a a g t 3′
... ----------] fur
*709920 * *709930 * *709940 * *709950 * *709960 *
5′ g a c a g a a t t t g c t c t t g a g a t a a t g c g t a t c a t t a t a g a a t t g c c a c g c c t a a 3′
*709970 * *709980 * *709990 * *710000 * *710010 * *710020
5′ a t g a a a a c c a c a a g t c c c t g g c a a a t a t t g t t a a t a a a a a c g t g g c a c a g c t t 3′
* *710030 * *710040 * *710050 * *710060 * *710070
5′ a c a t t t a c a a c g g c a a g g c c a c t t g a a c a c c g g g a c a t t g t a c a g g t a c a a c a 3′
* *710080 * *710090 * *710100 * *710110 * *710120 *
5′ g c a a a a g t t a c a a a t t t g t a g c a a t t a t t t t g a t t g g c a t t a t c t a t t a a t a c 3′
OxyR.oxidized @710103, 14.5 bits
*710130 * *710140 * *710150 * *710160 * *710170 * *710180
5′ g g c g t a g a c a t g a g t c t a c g c c g c a t c a c a t c a g g c a t t g a g a a t t t c g t c g a 3′
<---------- ... fldA
* *710190 * *710200 * *710210 * *710220 * *710230
5′ g a t g c a a c t c t t c a g a a a t c t g t t t a a c c c a t t t t t t c t a c a c g t t c a g c g g t c 3′
... ---------- ... fldA

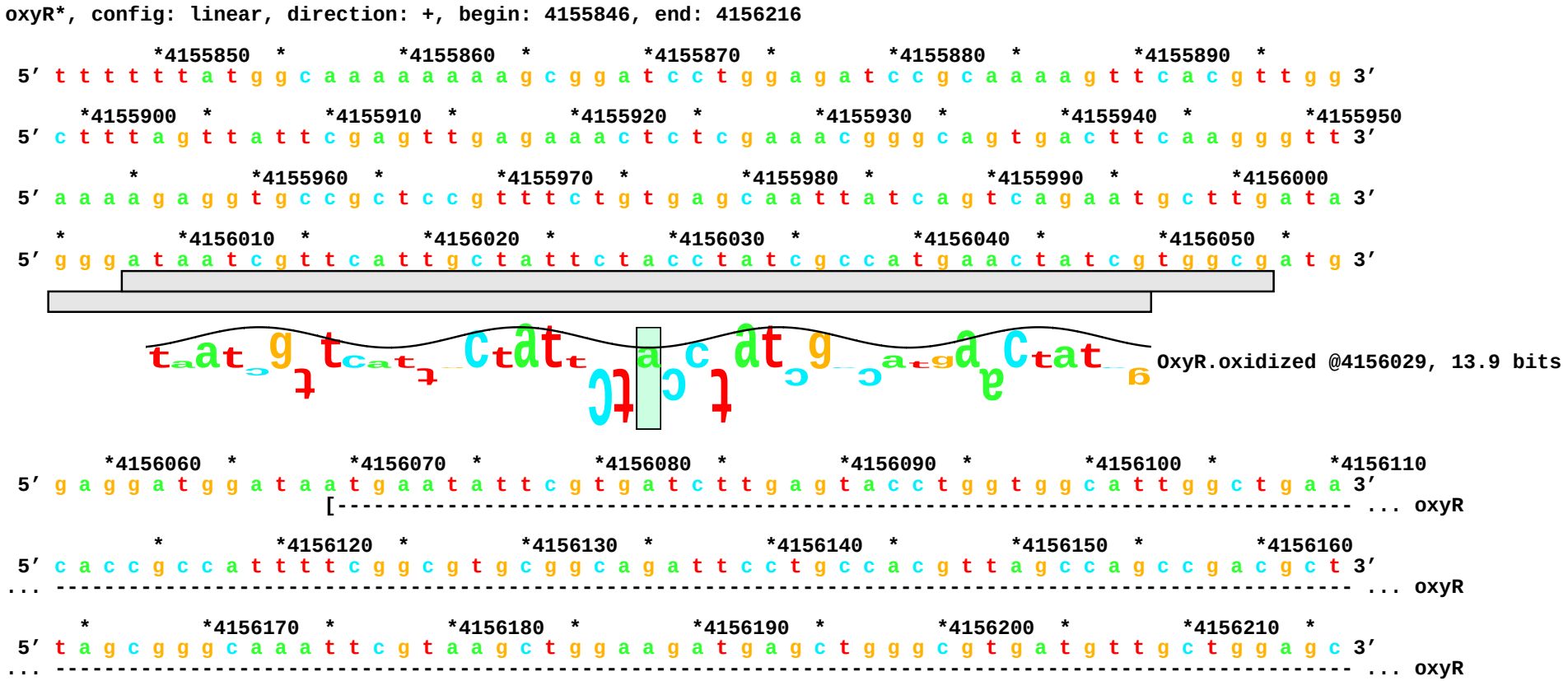
537879, config: linear, direction: +, begin: 537696, end: 538066

```
           *537700   *         *537710   *         *537720   *         *537730   *         *537740   *
 5′ a t g t a t t a t t g c c g g a g c c a g t a t t c a c t a c g g c g c t g a t a c c t g g a a c g t g c 3′
... ---------------------------------------------------------------------------------------------------- ... ybbW

      *537750   *         *537760   *         *537770   *         *537780   *         *537790   *         *537800
 5′ t g g a t a t t g t t c a g c g t t g g g a c a g c c t g t t c g c c t c g t t c t t t g c g g t a c t g 3′
... ---------------------------------------------------------------------------------------------------- ... ybbW

         *         *537810   *         *537820   *         *537830   *         *537840   *         *537850
 5′ g t t a t t c t g a t g a c a a c t a t c t c c a c t a a c g c g a c c g g t a a t a t t a t t c c a g c 3′
... ---------------------------------------------------------------------------------------------------- ... ybbW

    *         *537860   *         *537870   *         *537880   *         *537890   *         *537900   *
 5′ c g g t t a t c a g a t t g c c g c c a t t g c a c c g a c a a a a a c t g a c c t a t a a a a a c g g c g 3′
... ---------------------------------------------------------------------------------------------------- ... ybbW
```



OxyR.oxidized @537879, 13.9 bits

```
      *537910   *         *537920   *         *537930   *         *537940   *         *537950   *         *537960
 5′ t a c t g a t t g c c a g t a t t a t c a g c t t g c t g a t c t g c c c g t g g a a a t t a a t g g a a 3′
... ---------------------------------------------------------------------------------------------------- ... ybbW

         *         *537970   *         *537980   *         *537990   *         *538000   *         *538010
 5′ a a t c a g g a c a g c a t t t a t c t t t t c c t c g a t a t t a t c g g c g g a a t g c t t g g t c c 3′
... ---------------------------------------------------------------------------------------------------- ... ybbW

    *         *538020   *         *538030   *         *538040   *         *538050   *         *538060   *
 5′ g g t a a t t g g t g t c a t g a t g g c g c a t t a t t t t g t g g t g a t g c g c g g a c a a a t t a 3′
... ---------------------------------------------------------------------------------------------------- ... ybbW
```

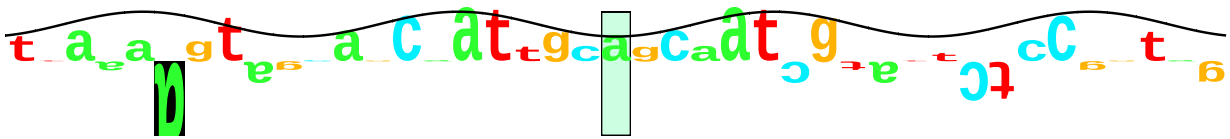

oxyR*, config: linear, direction: +, begin: 4155846, end: 4156216
*4155850 * *4155860 * *4155870 * *4155880 * *4155890 *
5′ t t t t t t a t g g c a a a a a a a a g c g g a t c c t g g a g a t c c g c a a a a g t t c a c g t t g g 3′
*4155900 * *4155910 * *4155920 * *4155930 * *4155940 * *4155950
5′ c t t t a g t t a t t c g a g t t g a g a a a c t c t c g a a a c g g g c a g t g a c t t c a a g g g t t 3′
* *4155960 * *4155970 * *4155980 * *4155990 * *4156000
5′ a a a a g a g g t g c c g c t c c g t t t c t g t g a g c a a t t a t c a g t c a g a a t g c t t g a t a 3′
* *4156010 * *4156020 * *4156030 * *4156040 * *4156050 *
5′ g g g a t a a t c g t t c a t t g c t a t t c t a c c t a t c g c c a t g a a c t a t c g t g g c g a t g 3′
OxyR.oxidized @4156029, 13.9 bits
*4156060 * *4156070 * *4156080 * *4156090 * *4156100 * *4156110
5′ g a g g a t g g a t a a t g a a t a t t c g t g a t c t t g a g t a c c t g g t g g c a t t g g c t g a a 3′
[---------- ... oxyR
* *4156120 * *4156130 * *4156140 * *4156150 * *4156160
5′ c a c c g c c a t t t t c g g c g t g c g g c a g a t t c c t g c c a c g t t a g c c a g c c g a c g c t 3′
... ---------- ... oxyR
* *4156170 * *4156180 * *4156190 * *4156200 * *4156210 *
5′ t a g c g g g c a a a t t c g t a a g c t g g a a g a t g a g c t g g g c g t g a t g t t g c t g g a g c 3′
... ---------- ... oxyR

```
2698016, config: linear, direction: +, begin: 2697833, end: 2698203

        *         *2697840  *         *2697850  *         *2697860  *         *2697870  *         *2697880  *
 5' c a g a a g g t g t g c c c g a t c c c c a a t a c t a t t g t g a a a g a t c c g g c g c a t g t c g a 3'
... ------------------------------------------------------------------------------------------------------ ... yfhL

            *2697890  *         *2697900  *         *2697910  *         *2697920  *         *2697930  *
 5' g a c a g a a g a a c a g t t g t g g g a t a a a t t t g t g c t g a t g c a c c a c g c g g a t a a a a 3'
... ------------------------------------------------------------------------------------------------------ ... yfhL

      *2697940  *         *2697950  *         *2697960  *         *2697970  *         *2697980  *         *2697990
 5' t t t a a t a t t c t a c t c t g g a a g t a g a g t a t t a a t t a t a t t a c t g g g a a g c c t t a 3'
... --------> yfhL

          *         *2698000  *         *2698010  *         *2698020  *         *2698030  *         *2698040
 5' a c g c c a t t a t a t t t a t t t a a t t g a t g a c a t t a g c a t a a t c a t t c a c t a a g t t a 3'
```

OxyR.oxidized @2698016, 13.8 bits

```
    *         *2698050  *         *2698060  *         *2698070  *         *2698080  *         *2698090  *
 5' a t t t a t a t a g t a t c t g c c c a g a c a c t t a t t t a t a g t t a t t a a a g g t g c g t c c g 3'

        *2698100  *         *2698110  *         *2698120  *         *2698130  *         *2698140  *         *2698150
 5' a c t g g t t c a c c g g a c g c a c c t t a a g t a c g t t t c c t t g t g t t a t a a g a a c a g a a 3'

            *         *2698160  *         *2698170  *         *2698180  *         *2698190  *         *2698200
 5' g g a t c a g c t g t a a a a c a g c a a t g a t g a t t t t g a t g a c c c g t t t a a t c a g g t a t 3'
```

```
1103699, config: linear, direction: +, begin: 1103566, end: 1103883

            *1103570  *         *1103580  *         *1103590  *         *1103600  *         *1103610  *
 5' t c a a a a a a c g g c a a t t g t a g t g c a g a g a c a g t c g c a a a t g g c t a t t c g c g t g a 3'
... ------------------------------------------------------------------------------------------------------ ... csgB

      *1103620  *         *1103630  *         *1103640  *         *1103650  *         *1103660  *         *1103670
 5' c a c a a c g t t a a t t t c c a t t c g a c t t t t a a a t c a a t c c g a t g g g g g t t t t a c a t 3'
... -------------------> csgB                                                                          [--- ... csgA

          *         *1103680  *         *1103690  *         *1103700  *         *1103710  *         *1103720
 5' g a a a c t t t t a a a a g t a g c a g c a a t t g c a g c a a t c g t a t t c t c c g g t a g c g c t c 3'
... ------------------------------------------------------------------------------------------------------ ... csgA
```

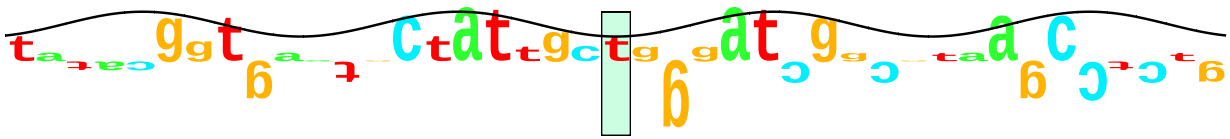


OxyR.oxidized @1103699, 13.7 bits

```
    *         *1103730  *         *1103740  *         *1103750  *         *1103760  *         *1103770  *
 5' t g g c a g g t g t t g t t c c t c a g t a c g g c g g c g g c g g t a a c c a c g g t g g t g g c g g t 3'
... ------------------------------------------------------------------------------------------------------ ... csgA

        *1103780  *         *1103790  *         *1103800  *         *1103810  *         *1103820  *         *1103830
 5' a a t a a t a g c g g c c c a a a t t c t g a g c t g a a c a t t t a c c a g t a c g g t g g c g g t a a 3'
... ------------------------------------------------------------------------------------------------------ ... csgA

            *         *1103840  *         *1103850  *         *1103860  *         *1103870  *         *1103880
 5' c t c t g c a c t t g c t c t g c a a a c t g a t g c c c g t a a c t c t g a c t t g a c t a t t a c c c 3'
... ------------------------------------------------------------------------------------------------------ ... csgA
```

77803, config: linear, direction: +, begin: 77670, end: 77987

```
    *77670    *        *77680    *        *77690    *        *77700    *        *77710    *        *77720
 5' c a t t t a t g c t g g t c g c t t t t a t g a t g g g g g t g g c c g g g g c g c t a c a g g c t c c t 3'
... ---------------------------------------------------------------------------------------------------- ... setA

       *        *77730    *        *77740    *        *77750    *        *77760    *        *77770    *
 5' a c a t t g a g c t t a t t t c t g a g t c g t g a g g t t g g c g c g c a a c c t t t c t g g a t c g g 3'
... ---------------------------------------------------------------------------------------------------- ... setA

          *77780    *        *77790    *        *77800    *        *77810    *        *77820    *
 5' c c t c t t t t a t a c g g t g a a t g c t a t t g c t g g g a t c g g c g t a a g c c t c t g g t t g g 3'
... ---------------------------------------------------------------------------------------------------- ... setA
```

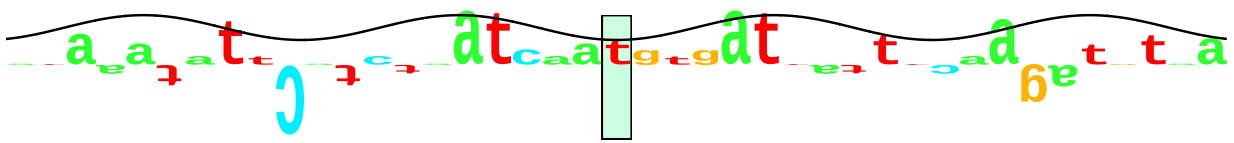


OxyR.oxidized @77803, 13.5 bits

```
    *77830    *        *77840    *        *77850    *        *77860    *        *77870    *        *77880
 5' c a a a a c g t t c t g a c a g t c a g g g c g a t c g g c g a a a a c t g a t t a t a t t t t g c t g t 3'
... ---------------------------------------------------------------------------------------------------- ... setA

       *        *77890    *        *77900    *        *77910    *        *77920    *        *77930
 5' t t g a t g g c t a t c g g c a a t g c g c t a t t g t t t g c a t t t a a t c g t c a t t a t c t g a c 3'
... ---------------------------------------------------------------------------------------------------- ... setA

    *        *77940    *        *77950    *        *77960    *        *77970    *        *77980    *
 5' g c t t a t c a c c t g t g g t g t g c t t c t g g c a t c t c t g g c c a a t a c g g c a a t g c c a c 3'
... ---------------------------------------------------------------------------------------------------- ... setA
```

576117, config: linear, direction: +, begin: 575934, end: 576304

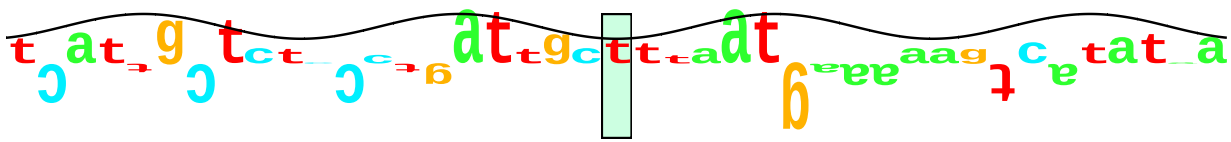
```
     *         *575940   *         *575950   *         *575960   *         *575970   *         *575980   *
 5′ t c c c g t a c a g a t c c a g c t t g t t a c t g t c t t t a t t a t a a a t t t c a g c t g c c t g a 3′
... ---------------------------------------------------------------------------------------------------- ... nmpC

         *575990   *         *576000   *         *576010   *         *576020   *         *576030   *
 5′ g c a g a c a t c g c c a t t a g t a c t g a t g c a g c t a c a g c a g a a a t t g c c a c t g t t a a 3′
... ---------------------------------------------------------------------------------------------------- ... nmpC

    *576040   *         *576050   *         *576060   *         *576070   *         *576080   *         *576090
 5′ t t t t t t c a t c g t g a g c c c t t t t t t t g a a c t a t t a t t a a a a a a t g a t g t c a c t g 3′
... ---------------] nmpC

       *         *576100   *         *576110   *         *576120   *         *576130   *         *576140   *
 5′ c g c g a t a a a t a t t c a t c t a a t c a a t g t g a t t a t t t c a a g a t g t a a g t t t t g g t 3′
```



OxyR.oxidized @576117, 13.3 bits

```
          *576150   *         *576160   *         *576170   *         *576180   *         *576190   *
 5′ t t c t c g t t t g a t t t g t g a a g t a g a t c t c t a t t t t t a t c t g a a c t t t t t t c t a t 3′

     *576200   *         *576210   *         *576220   *         *576230   *         *576240   *         *576250
 5′ c g a a t c c t a t t c a t g g c t c t t g g c t g a a t a a a a a t a a a t c t a t t a g c c a a t t t 3′

         *         *576260   *         *576270   *         *576280   *         *576290   *         *576300
 5′ a t a t t a a c g g c t g t t a t t t a t a a g t g c t c t a t a a t t t g a a g g t t c a a t t t a a a a 3′
```

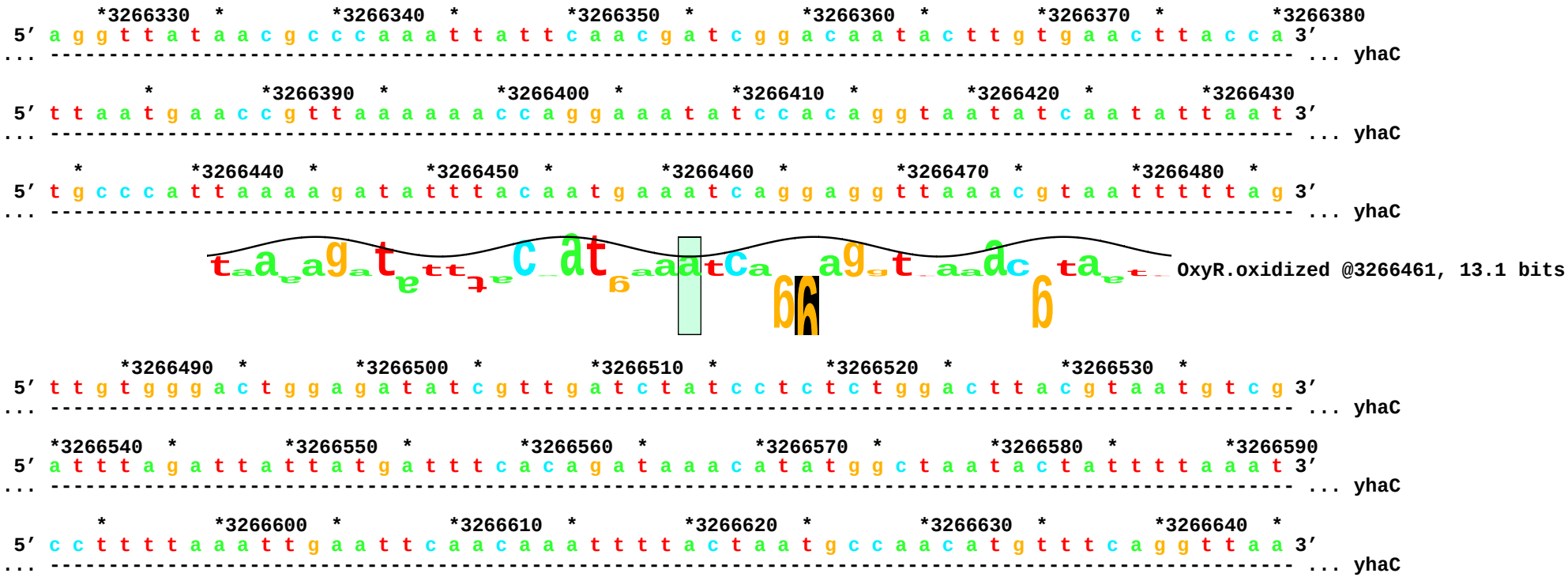
```
1524021, config: linear, direction: +, begin: 1523838, end: 1524314

       *1523840  *         *1523850  *         *1523860  *         *1523870  *         *1523880  *         *1523890
 5′ a g t c g g g c t c c t g c a c c t a a a a a c a a g c c g g t g c c a a t c g c g c c g c c a a t g g c 3′
... ---------------------------------------------------------------------------------------------------- ... ansP

           *         *1523900  *         *1523910  *         *1523920  *         *1523930  *         *1523940
 5′ g a t c a t c t g c a c c t g g c g a t t g c c c a t c g c t t t g t g a t a c c c c t c t t c g t g g g 3′
... ---------------------------------------------------------------------------------------------------- ... ansP

      *         *1523950  *         *1523960  *         *1523970  *         *1523980  *         *1523990  *
 5′ c a t t a a g c c a g c g g c g t t t c g c g g c g t g t t g a t c t g a a g t g t c g g t g t c g t g t 3′
... ---------------------------------------------------------------------------------------------------- ... ansP

         *1524000  *         *1524010  *         *1524020  *         *1524030  *         *1524040  *
 5′ t t a c t c a t t g c t c t c c c t g a t t g c t t t a a t g a a a a a a g t c a t a t a a g t t g c c a t 3′
... --------------] ansP
```



OxyR.oxidized @1524021, 13.2 bits

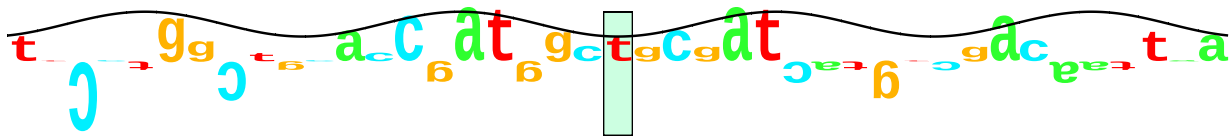
```
    *1524050  *         *1524060  *         *1524070  *         *1524080  *         *1524090  *         *1524100
 5′ g a a c a a t g t t t a t t c a t c c t g g c g a t g a t a g t t a t c a c c a t t a t t c t t t a t g g 3′

       *         *1524110  *         *1524120  *         *1524130  *         *1524140  *         *1524150  *
 5′ g t a t a a a a c t a t c g g c g c a g c a t c c t a c c c g t t a t c g a t a a a c g a t g c a a a a c 3′

           *1524160  *         *1524170  *         *1524180  *         *1524190  *         *1524200  *
 5′ a t c c c c t t a c a a t c c t g a a g g g g a t t a a t a c a a c t g a c g a a a a a a t g a c a a a t 3′

      *1524210  *         *1524220  *         *1524230  *         *1524240  *         *1524250  *         *1524260
 5′ c c t t t t g c t g g t t a a c c t g t g t a c t g t c c t a c a c t t a a t c t t t a a a a g a t t g t 3′

         *         *1524270  *         *1524280  *         *1524290  *         *1524300  *         *1524310
 5′ g a g g g g c a t a t g a t t a a g g t g t a t g g c g t a c c c g g a t g g g g c t c t a c a a t c a g 3′
                   [---------------------------------------------------------------------------------- ... yncG
```

3266461, config: linear, direction: +, begin: 3266328, end: 3266645



3406233, config: linear, direction: +, begin: 3406100, end: 3406417

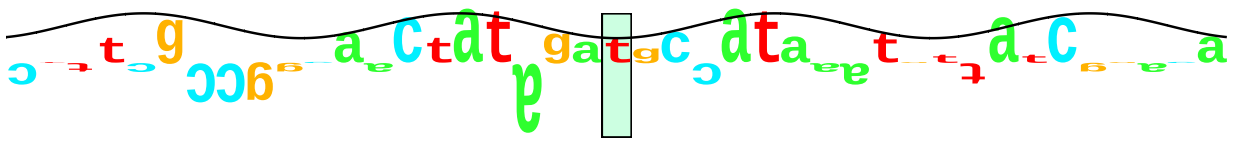
```
    *3406100  *         *3406110  *         *3406120  *         *3406130  *         *3406140  *         *3406150
 5′ g t a t g c a c c t g g c c g g a g c g t t a g g t c g g g c g g t g a t c c c c g a t c t c a c c g t a 3′
... ---------------------------------------------------------------------------------------------------- ... panF

       *         *3406160  *         *3406170  *         *3406180  *         *3406190  *         *3406200  *
 5′ c c g g a c c t g g t g a t c c c a a c g t t a a t g g t a a a a a g t g c t g c c a c c g t t t g c t g c 3′
... ---------------------------------------------------------------------------------------------------- ... panF

          *3406210  *         *3406220  *         *3406230  *         *3406240  *         *3406250  *
 5′ c g g g a t c t t c c t g g c t g c a c c g a t g g c t g c g a t c a t g t c g a c a a t t a a c g c c c 3′
... ---------------------------------------------------------------------------------------------------- ... panF
```



OxyR.oxidized @3406233, 12.7 bits

```
     *3406260  *         *3406270  *         *3406280  *         *3406290  *         *3406300  *         *3406310
 5′ a a c t g c t g c a a a g t t c c g c t a c g a t c a t t a a a g a t c t c t a t c t g a a t a t c c g t 3′
... ---------------------------------------------------------------------------------------------------- ... panF

       *         *3406320  *         *3406330  *         *3406340  *         *3406350  *         *3406360
 5′ c c g g a t c a a a t g c a a a a a c g a g a c g c g t c t g a a g c g g a t g t c g g c g g t a a t t a c 3′
... ---------------------------------------------------------------------------------------------------- ... panF

    *         *3406370  *         *3406380  *         *3406390  *         *3406400  *         *3406410  *
 5′ g t t a g t t c t c g g c g c g t t g c t g c t g c t t g c c g c c t g g a a g c c g c c a g a a a t g a 3′
... ---------------------------------------------------------------------------------------------------- ... panF
```

```
1485303, config: linear, direction: +, begin: 1485120, end: 1485490

    *1485120  *         *1485130  *         *1485140  *         *1485150  *         *1485160  *         *1485170
 5' t t t a t c t a c a g c a t t t c c t t a a a a g a t a t g t c a g g c t t g c g g a g t g g c g g t t a 3'

        *         *1485180  *         *1485190  *         *1485200  *         *1485210  *         *1485220  *
 5' a g g a c a t a c g a t t t c c t c c t t t c a g a g t g c t c c g c t t c t c a c t a t t a t c t c a c 3'

            *1485230  *         *1485240  *         *1485250  *         *1485260  *         *1485270  *
 5' g c a g t a t t c t t a a g g g a a c g a t a a g g a g g a a c c a t g a a c a t t a c c c c g t t t c c 3'
                                                                        [------------------------------------ ... ydcF

      *1485280  *         *1485290  *         *1485300  *         *1485310  *         *1485320  *         *1485330
 5' g a c g c t t t c g c c g g c a a c t a t a g a t g c c a t a a a t g t t a t c g g a c a g t g g c t g g 3'
... ------------------------------------------------------------------------------------------------------ ... ydcF
```

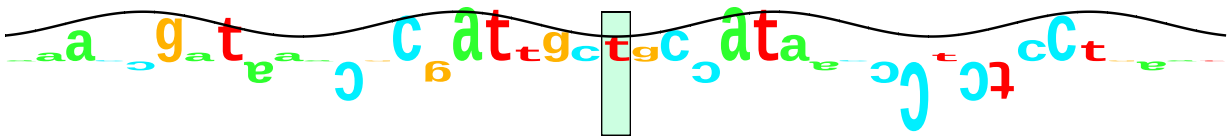


OxyR.oxidized @1485303, 12.4 bits

```
          *         *1485340  *         *1485350  *         *1485360  *         *1485370  *         *1485380
 5' c g c a g g a t g a t t t c t c c g g t g a g g t g c c g t a t c a g g c c g a t t g c g t g a t c c t t 3'
... ------------------------------------------------------------------------------------------------------ ... ydcF

    *         *1485390  *         *1485400  *         *1485410  *         *1485420  *         *1485430  *
 5' g c a g g c a a t g c g g t t a t g c c g a c t a t c g a t g c g g c a t g t a a g a t t g c c c g c g a 3'
... ------------------------------------------------------------------------------------------------------ ... ydcF

        *1485440  *         *1485450  *         *1485460  *         *1485470  *         *1485480  *         *1485490
 5' t c a g c a a a t t c c t t t a c t g a t t a g t g g t g g t a t c g g t c a c t c g a c a a c t t t t t 3'
... ------------------------------------------------------------------------------------------------------ ... ydcF
```

4071146, config: linear, direction: +, begin: 4071013, end: 4071330

```
       *         *4071020  *         *4071030  *         *4071040  *         *4071050  *         *4071060  *
 5′ g a g t c g c a c c t t t g t c t a c c a g a t g c c g c a c a g c t t c g g c g t t c a c a t c a a a g 3′
... ---------------------------------------------------------------------------------------------------- ... yihU

           *4071070  *         *4071080  *         *4071090  *         *4071100  *         *4071110  *
 5′ a c g c g a a g t t g a t g c c c t t g c t g c a a t a a a t t g c t c g c c a t t g g c g a a c c c a t 3′
... ---------------------------------------------------------------------------------------------------- ... yihU

     *4071120  *         *4071130  *         *4071140  *         *4071150  *         *4071160  *         *4071170
 5′ t t g t c c t a a a c c g a t a a a c g c g a t t g c t g c c a t a a c c c t c t c c t g a a t a c a g t 3′
... ------------------------------------------------------------------] yihU
```

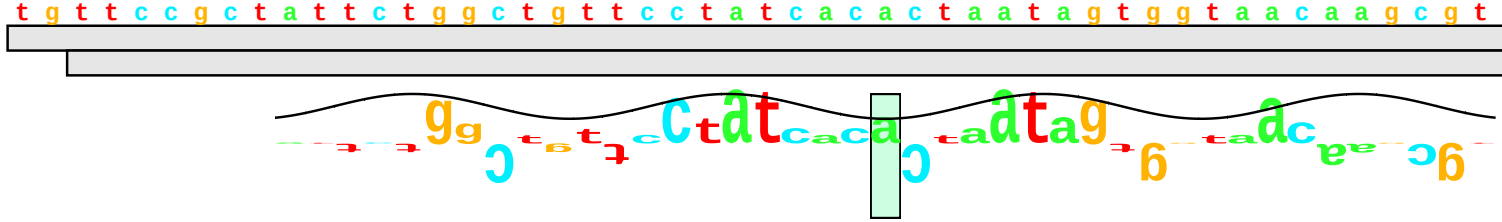


OxyR.oxidized @4071146, 12.4 bits

```
       *         *4071180  *         *4071190  *         *4071200  *         *4071210  *         *4071220
 5′ t a t g t c a c t t t t t g t c a t t t a t g a c a t g c t t t g c t t g t c t g t t t t t g a t c g t a 3′

    *         *4071230  *         *4071240  *         *4071250  *         *4071260  *         *4071270  *
 5′ t t t g t a a t t t a t c g t c a a a a a a t t g a c a g c c g t c a c t t t t t a a a c a a t t g g t g 3′

       *4071280  *         *4071290  *         *4071300  *         *4071310  *         *4071320  *         *4071330
 5′ a a a t t a a a a t g a a c g c a t c c c a a a a t g t t t a a g g a a t g a c c a t g a t t c g t g t t 3′
```

dps*, config: linear, direction: +, begin: 848040, end: 848410

```
    *848040   *        *848050   *        *848060   *        *848070   *        *848080   *        *848090
 5' a a c t c t a c t g t t g c t t t t t t t c t c g c t g t c g g a g a c a t c g t t g c g g g t a t a a a g 3'
... ---------------------------------------------------------------------------------------------------- ... dps

       *        *848100   *        *848110   *        *848120   *        *848130   *        *848140   *
 5' c a g a t t g g t c g c t t t t g a t t t a a c t a a t t t a g c g g t a c t c a t a a t t t c a t a t c 3'
... ------------------------------------------------------------------------------] dps

          *848150   *        *848160   *        *848170   *        *848180   *        *848190   *
 5' c t c t t g a t g t t a t g t c c c a g t a a t t a a c g a g a t t a a g t a t a g c a c c g g c t a t g 3'

     *848200   *        *848210   *        *848220   *        *848230   *        *848240   *        *848250
 5' t g t t c c g c t a t t c t g g c t g t t c c t a t c a c a c t a a t a g t g g t a a c a a g c g t g a a 3'
```

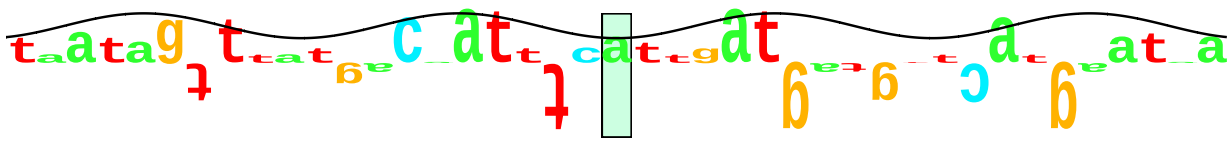


OxyR.oxidized @848228, 12.3 bi

```
       *        *848260   *        *848270   *        *848280   *        *848290   *        *848300
 5' a a a c a a a a c t a a t a a a g a t t c a a t g a g t t a g a t a t a t t g a t a a g a a c a a t t c t 3'

    *        *848310   *        *848320   *        *848330   *        *848340   *        *848350   *
 5' t a t t t a t c t g c t c g c c a g g a a t t t t c g g a a t a a a t a t g c t t t t g c a t a a t t c g 3'

       *848360   *        *848370   *        *848380   *        *848390   *        *848400   *        *848410
 5' a t a t a t a a a g a c g g t g t a g a g g a a a a g t a g c g a g a a a t t c t g c a t g g t t a t g c 3'
```

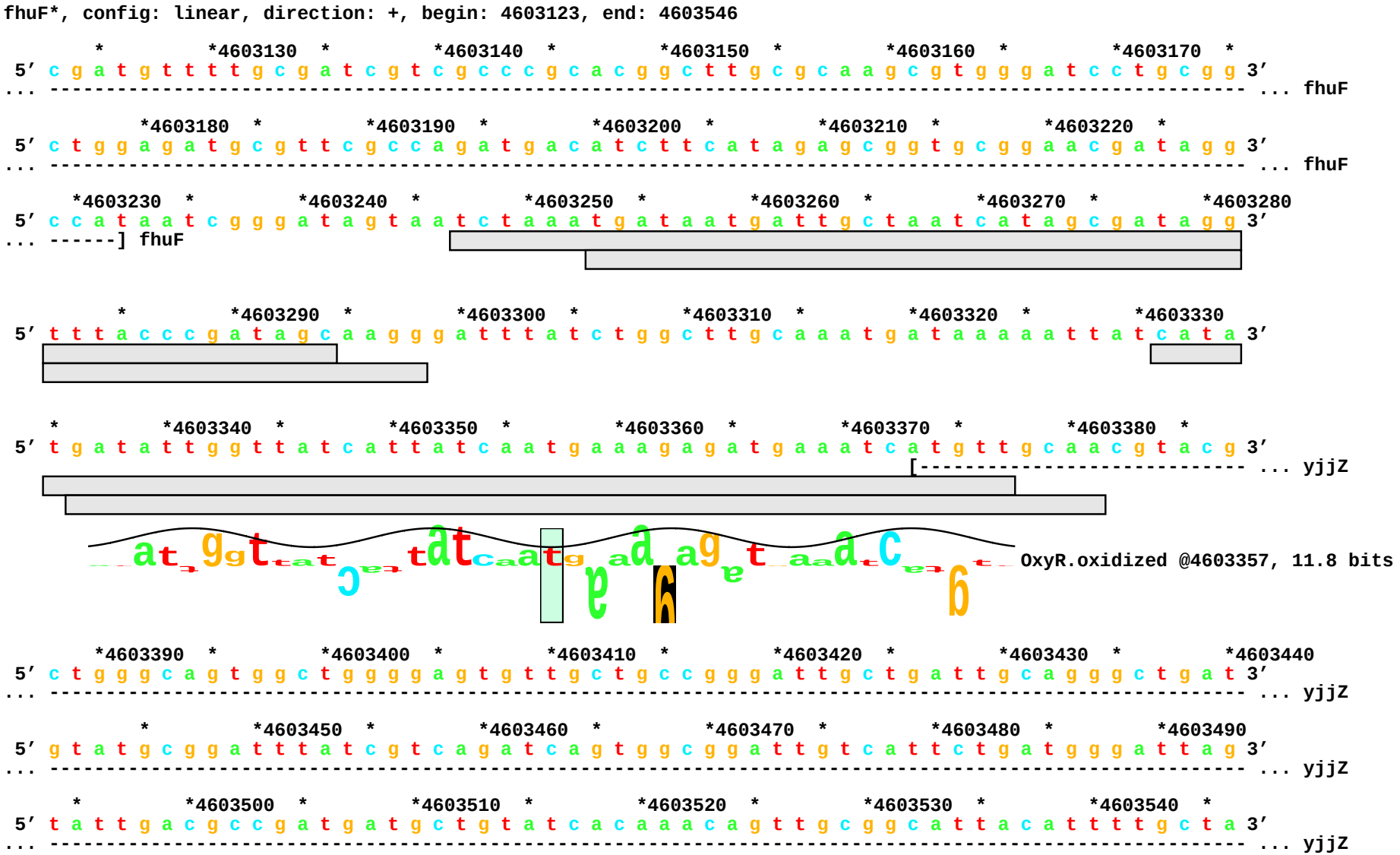
ybaL, config: linear, direction: +, begin: 502360, end: 502730

```
    *502360   *         *502370   *         *502380   *         *502390   *         *502400   *         *502410
 5' c c a c c a g a g g a g a a a t a c g t a g t t t a t t g g c c a g c a t g c c g a g g a t a a a g g c g 3'
... ---------------------------------------------------------------------------------------------------- ... ybaL

       *         *502420   *         *502430   *         *502440   *         *502450   *         *502460   *
 5' a g c a c a a g g c c g c c a a c a a t g g t g g t g a t a a g c g g g g t g g c g t g a t g c a t t c c 3'
... ----------------------------------------------------------------------------------------------------] ybaL

          *502470   *         *502480   *         *502490   *         *502500   *         *502510   *
 5' g t c t c c t t t t c c t g g t g g t t a t t g t c c a t t t t t g g c c g g g a a a a c c a a a a t t a 3'

     *502520   *         *502530   *         *502540   *         *502550   *         *502560   *         *502570
 5' c a g g t a a t a g t t t a t g a c a a t t t c a t t g a t g a t g t t c a t g a a t a a t t a t t g a a 3'
```



OxyR.oxidized @502543, 12.2 bits

```
       *         *502580   *         *502590   *         *502600   *         *502610   *         *502620
 5' t t t t g c a g a a a a a t g g a a t t a g c t g c a a a a a a a a g c a c g g a t c g g a a a a c a g a a 3'

    *         *502630   *         *502640   *         *502650   *         *502660   *         *502670   *
 5' g g c g g t t t a a c a g a g g a a a g g c t t a t g g c g a c t g t a a a a c g a t g c a g c c a a a g 3'

       *502680   *         *502690   *         *502700   *         *502710   *         *502720   *         *502730
 5' t t t g c c t t t g g c t g c a a t g a a a t c a g t c t t t a t g c c g g t t a t c a g g c a g g a a t 3'
                                                <---------------------------------------------------------- ... fsr
```


fhuF*, config: linear, direction: +, begin: 4603123, end: 4603546
*4603130
*4603140
*4603150
*4603160
*4603170
5′ c g a t g t t t t g c g a t c g t c g c c c g c a c g g c t t g c g c a a g c g t g g g a t c c t g c g g 3′
... fhuF
*4603180
*4603190
*4603200
*4603210
*4603220
5′ c t g g a g a t g c g t t c g c c a g a t g a c a t c t t c a t a g a g c g g t g c g g a a c g a t a g g 3′
... fhuF
*4603230
*4603240
*4603250
*4603260
*4603270
*4603280
5′ c c a t a a t c g g g a t a g t a a t c t a a a t g a t a a t g a t t g c t a a t c a t a g c g a t a g g 3′
... ------] fhuF
*4603290
*4603300
*4603310
*4603320
*4603330
5′ t t t a c c c g a t a g c a a g g g a t t t a t c t g g c t t g c a a a t g a t a a a a a t t a t c a t a 3′
*4603340
*4603350
*4603360
*4603370
*4603380
5′ t g a t a t t g g t t a t c a t t a t c a a t g a a a g a g a t g a a a t c a t g t t g c a a c g t a c g 3′
... yjjZ
OxyR.oxidized @4603357, 11.8 bits
*4603390
*4603400
*4603410
*4603420
*4603430
*4603440
5′ c t g g g c a g t g g c t g g g g a g t g t t g c t g c c g g g a t t g c t g a t t g c a g g g c t g a t 3′
... yjjZ
*4603450
*4603460
*4603470
*4603480
*4603490
5′ g t a t g c g g a t t t a t c g t c a g a t c a g t g g c g g a t t g t c a t t c t g a t g g g a t t a g 3′
... yjjZ
*4603500
*4603510
*4603520
*4603530
*4603540
5′ t a t t g a c g c c g a t g a t g c t g t a t c a c a a a c a g t t g c g g c a t t a c a t t t t g c t a 3′
... yjjZ