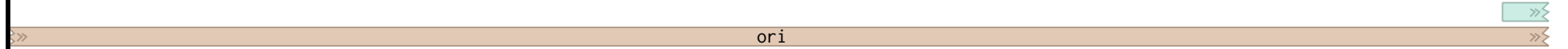


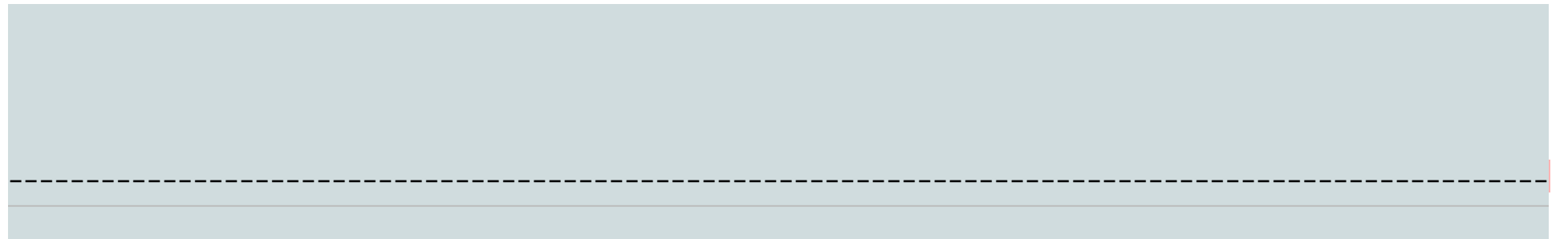
Template Alignment: 2020-09-07_E02_ASAS112SP3 (2020-09-07_E02_...

tatgagaaagcgccacgcttcccgaagggagaaaggcggacaggtatccggtaagcggcagggtcggaacaggagagcgcacgagggagcttccagggggg

10 20 30 40 50 60 70 80 90 100



template sequence pAS1.1-P3



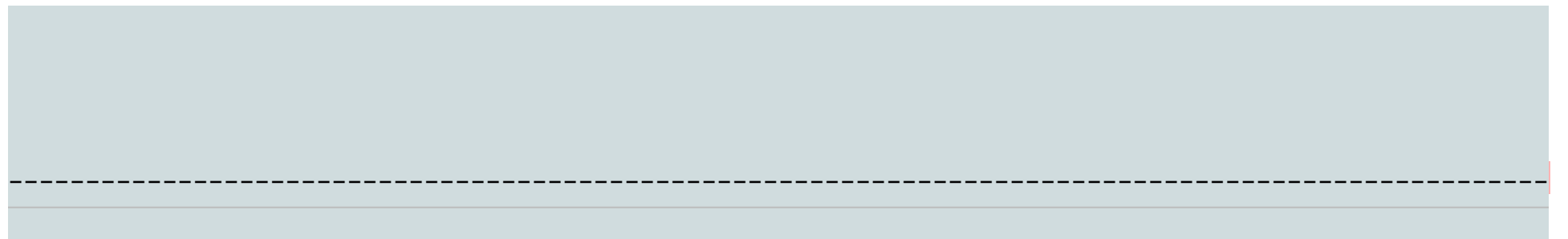
aligned sequence 2020-09-07_E02_ASAS112SP3 (2020-09-07_E02_ASAS112SP3.ab1)

aaacgcctggtatctttatagtcctgtcgggtttcgccacctctgacttgagcgtcgatTTTTGTGATGCTCGTCAGGGGGGCGGAGCCTATGGAAAAAC

110 120 130 140 150 160 170 180 190 200



template sequence pAS1.1-P3



aligned sequence 2020-09-07_E02_ASAS112SP3 (2020-09-07_E02_ASAS112SP3.ab1)

gccagcaacgcggcctttttacgggttcctggcagatcctagatgtggcgcaacgatgccggcgacaagcaggagcgcaccgacttcttccgcatcaagtg

210

220

230

240

250

260

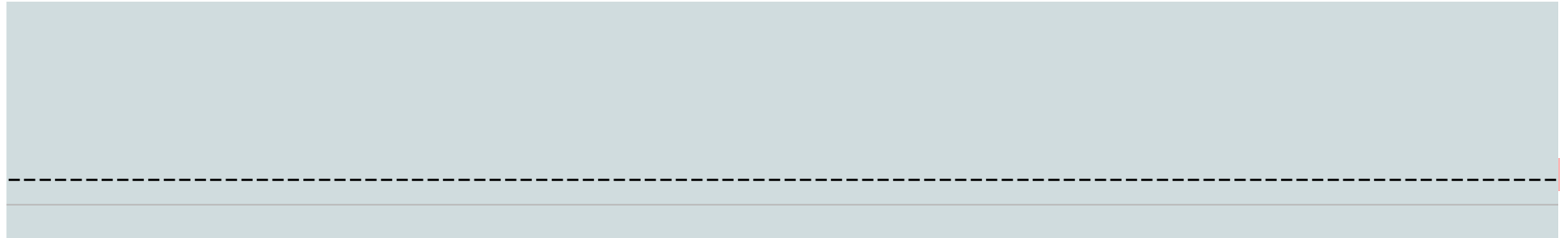
270

280

290

300

template sequence pAS1.1-P3



aligned sequence 2020-09-07_E02_ASAS112SP3 (2020-09-07_E02_ASAS112SP3.ab1)

tttggctctcaggccgaggcccacggcaagtatttgggcaaggggtcgctggtattcgtgcagggaagattcggaataccaagtacgagaaggacggc

310

320

330

340

350

360

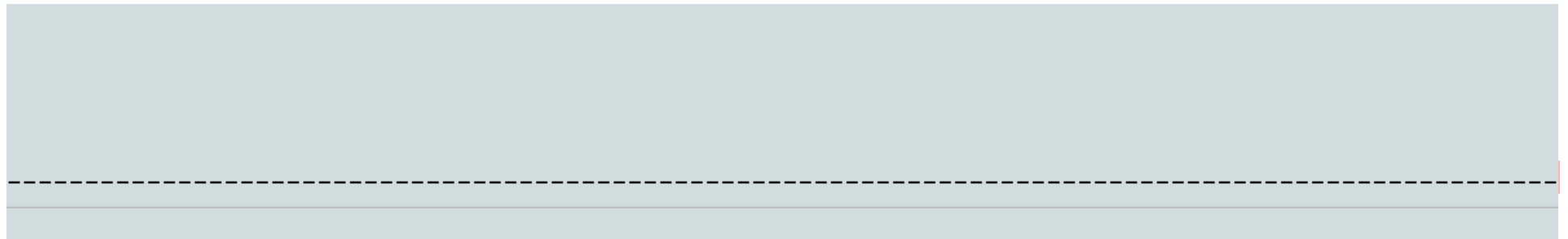
370

380

390

400

template sequence pAS1.1-P3



aligned sequence 2020-09-07_E02_ASAS112SP3 (2020-09-07_E02_ASAS112SP3.ab1)

cagacggtctacgggaccgacttcattgccgataaggtggattatctggacaccaaggcaccaggcgggtcaaatacaggaataagggcacattgccccgg

410

420

430

440

450

460

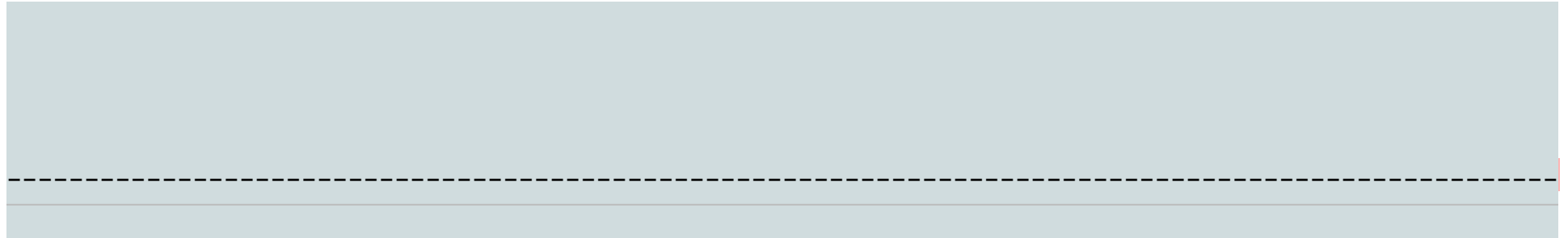
470

480

490

500

template sequence pAS1.1-P3



aligned sequence 2020-09-07_E02_ASAS112SP3 (2020-09-07_E02_ASAS112SP3.ab1)

cgtgagtcggggcaatcccgcaaggagggtgaatgaatcggacgtttgaccggaaggcatacaggcaagaactgatcgacgcgggggtttccgccgagga

510

520

530

540

550

560

570

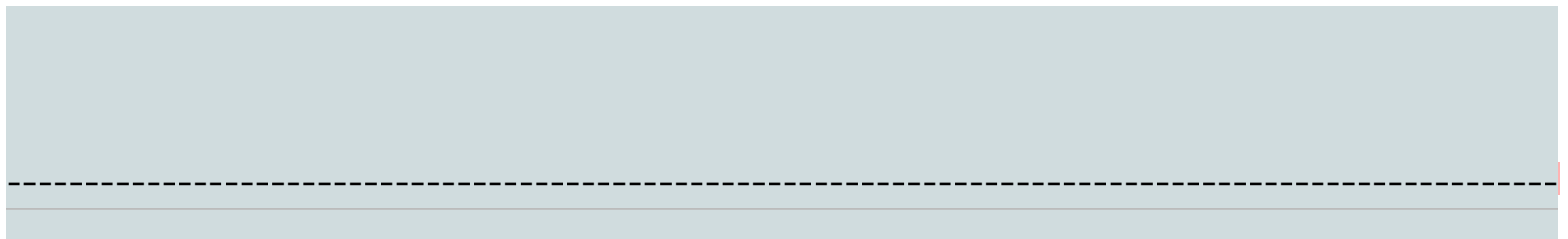
580

590

600

template sequence pAS1.1-P3

trfA »»



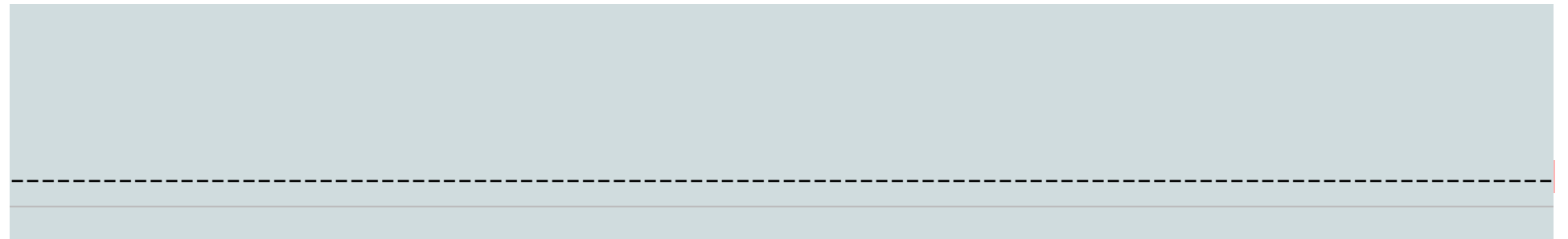
aligned sequence 2020-09-07_E02_ASAS112SP3 (2020-09-07_E02_ASAS112SP3.ab1)

tgccgaaaccatcgcaagccgcaccgtcatgcggtgcgccccgcgaaaccttccagtcggtcggctcgatgggtccagcaagctacggccaagatcgagcgc

610 620 630 640 650 660 670 680 690 700

>> trfA >>

template sequence pAS1.1-P3



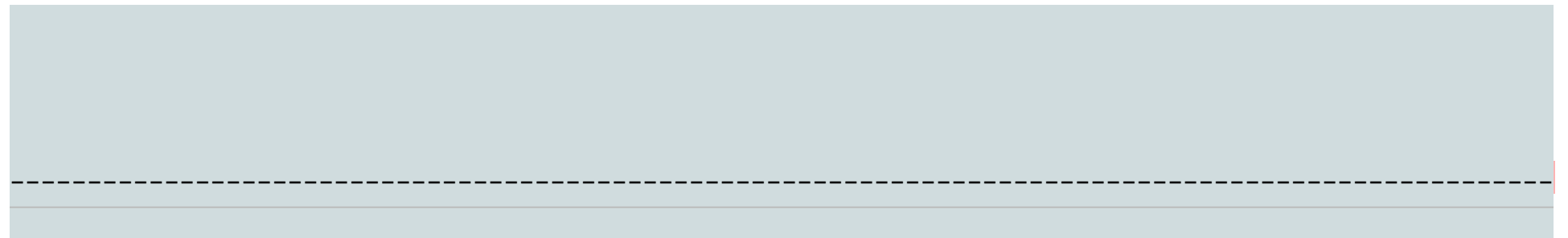
aligned sequence 2020-09-07_E02_ASAS112SP3 (2020-09-07_E02_ASAS112SP3.ab1)

gacagcgtgcaactggctccccctgccctgcccgcgccatcggccgccgtggagcggttcgcgtcgtcttgaacaggaggcggcaggtttggcgaagtcga

710 720 730 740 750 760 770 780 790 800

>> trfA >>

template sequence pAS1.1-P3



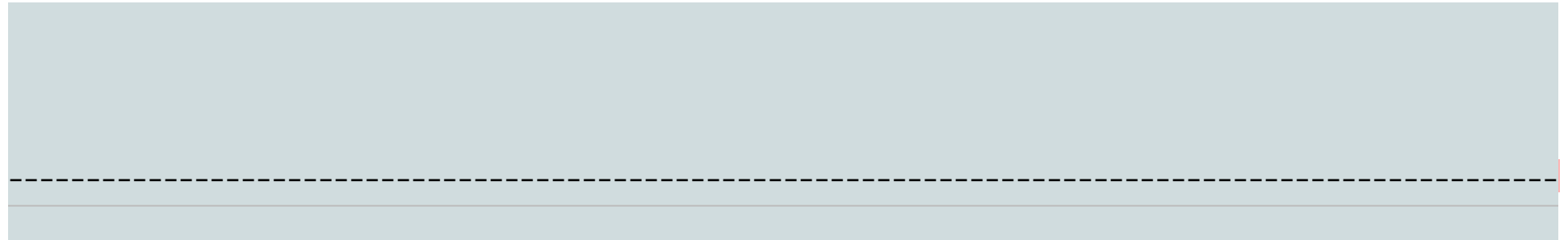
aligned sequence 2020-09-07_E02_ASAS112SP3 (2020-09-07_E02_ASAS112SP3.ab1)

tgaccatcgacacgcgaggaactatgacgaccaagaagcgaaaaaccgccggcgaggacctggcaaaacaggtcagcgaggccaagcaggccgcgttgct

810 820 830 840 850 860 870 880 890 900

>> trfA >>

template sequence pAS1.1-P3



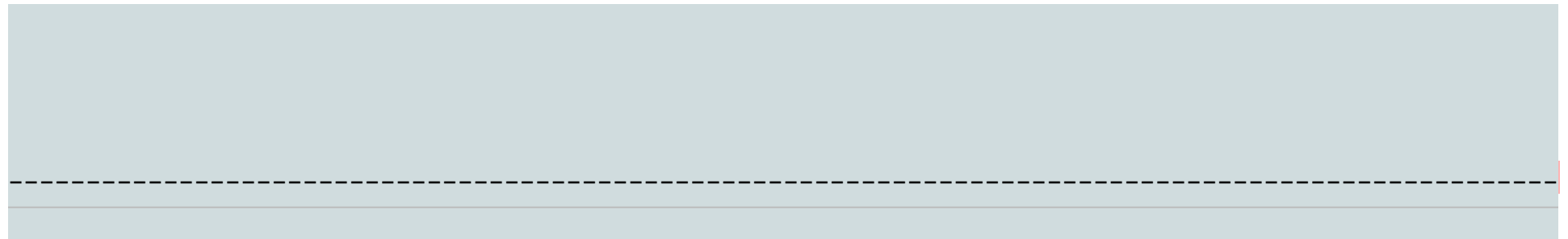
aligned sequence 2020-09-07_E02_ASAS112SP3 (2020-09-07_E02_ASAS112SP3.ab1)

gaaacacacgaagcagcagatcaaggaaatgcagctttccttgttcgatattgcgccgtggccggacacgatgcgagcgatgccaaacgacacggcccg

910 920 930 940 950 960 970 980 990 1,000

>> trfA >>

template sequence pAS1.1-P3



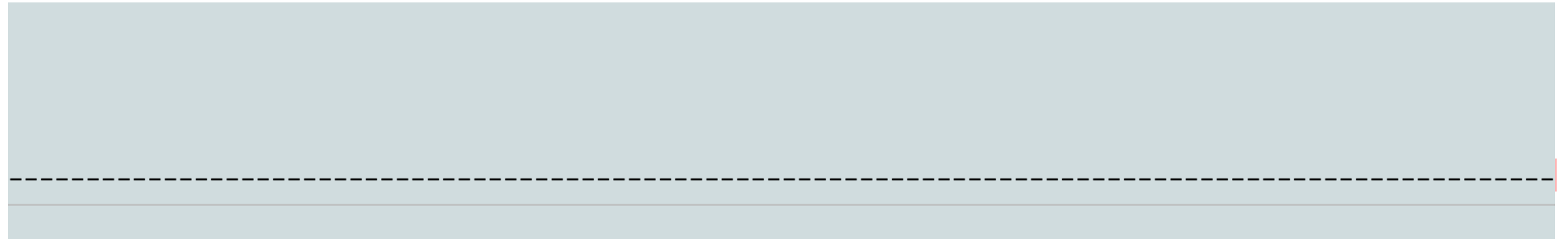
aligned sequence 2020-09-07_E02_ASAS112SP3 (2020-09-07_E02_ASAS112SP3.ab1)

tctgcccctgttcaccacgcgcaacaagaaaatcccgcgcgaggcgctgcaaaacaaggatcattttccacgtcaacaaggacgtgaagatcacctacaccg

1,010 1,020 1,030 1,040 1,050 1,060 1,070 1,080 1,090 1,100

>> trfA >>

template sequence pAS1.1-P3



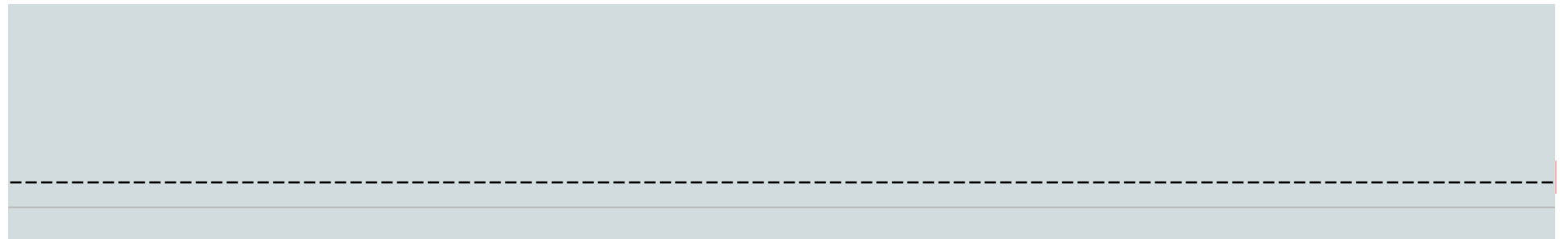
aligned sequence 2020-09-07_E02_ASAS112SP3 (2020-09-07_E02_ASAS112SP3.ab1)

gcgtcgagctgcgggccgacgatgacgaactggtgtggcagcaggtgttggagtacgcgaagcgcacccctatcggcgagccgatcaccttcacgttcta

1,110 1,120 1,130 1,140 1,150 1,160 1,170 1,180 1,190 1,200

>> trfA >>

template sequence pAS1.1-P3



aligned sequence 2020-09-07_E02_ASAS112SP3 (2020-09-07_E02_ASAS112SP3.ab1)

cgagctttgccaggacctgggctggtcgatcaatggccggtattacacgaaggccgaggaatgcctgtcgcgcctacaggcgacggcgatgggcttcacg

1,210

1,220

1,230

1,240

1,250

1,260

1,270

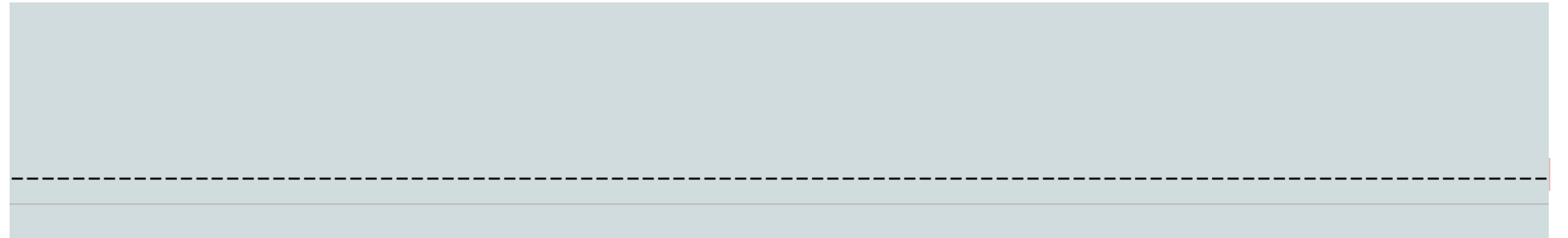
1,280

1,290

1,300

>> trfA >>

template sequence pAS1.1-P3



aligned sequence 2020-09-07_E02_ASAS112SP3 (2020-09-07_E02_ASAS112SP3.ab1)

tccgaccgcgttgggcacctggaatcgggtgtcgctgctgcaccgcttccgcgtcctggaccgtggcaagaaaacgtcccgttgccaggctcctgatcgacg

1,310

1,320

1,330

1,340

1,350

1,360

1,370

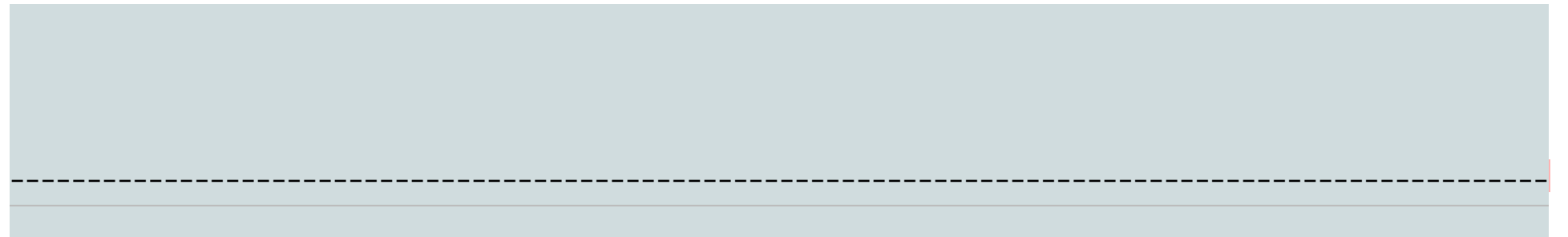
1,380

1,390

1,400

>> trfA >>

template sequence pAS1.1-P3



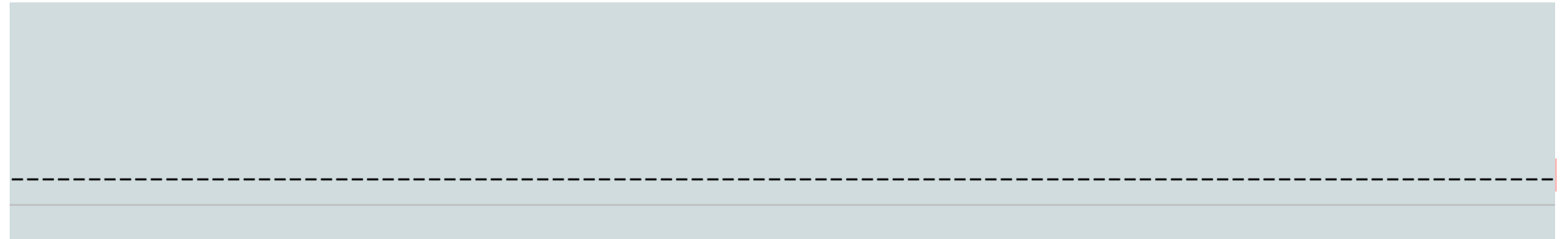
aligned sequence 2020-09-07_E02_ASAS112SP3 (2020-09-07_E02_ASAS112SP3.ab1)

aggaaatcgtcgtgctgtttgctggcgaccactacacgaaattcatatgggagaagtaccgcaagctgtcgccgacggcccgcggatgttcgactattt

1,410 1,420 1,430 1,440 1,450 1,460 1,470 1,480 1,490 1,500

>> trfA >>

template sequence pAS1.1-P3



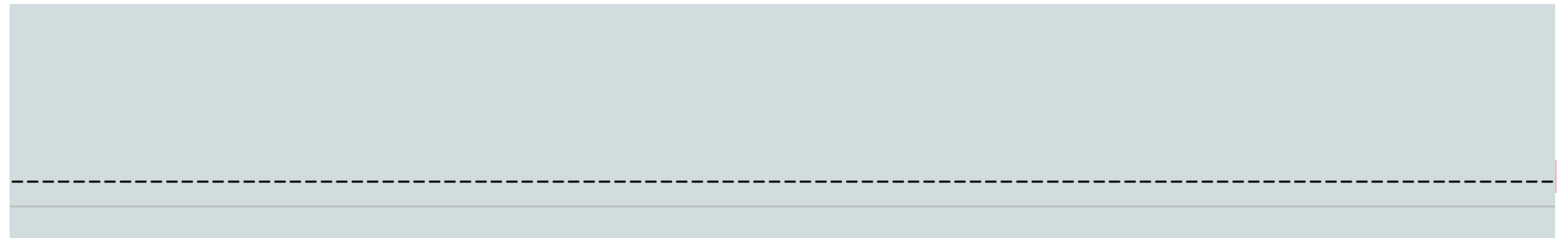
aligned sequence 2020-09-07_E02_ASAS112SP3 (2020-09-07_E02_ASAS112SP3.ab1)

cagctcgcaccgggagccgtacccgctcaagctggaaaccttccgcctcatgtgcggatcggattccacccgcgtgaagaagtggcgcgagcaggtcggc

1,510 1,520 1,530 1,540 1,550 1,560 1,570 1,580 1,590 1,600

>> trfA >>

template sequence pAS1.1-P3



aligned sequence 2020-09-07_E02_ASAS112SP3 (2020-09-07_E02_ASAS112SP3.ab1)

gagcctgcgaagagttgcgaggcagcggcctggtggaacacgcctgggtcaatgatgacctggtgcattgcaaacgctagggccttgtgggggtcagttc

1,610

1,620

1,630

1,640

1,650

1,660

1,670

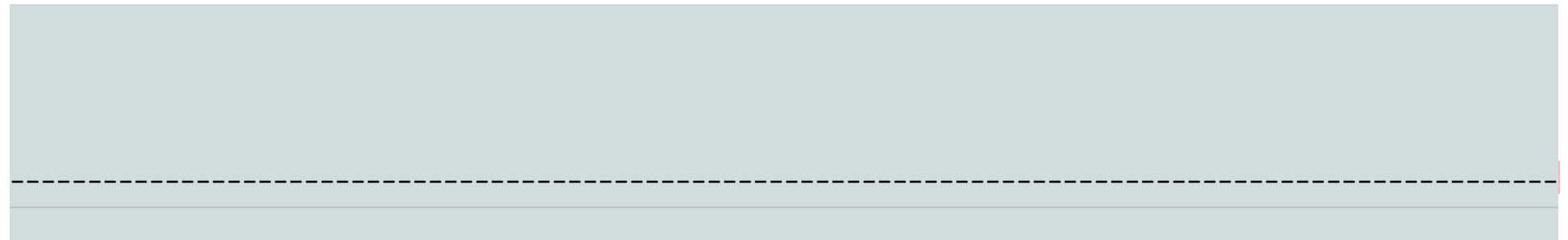
1,680

1,690

1,700



template sequence pAS1.1-P3



aligned sequence 2020-09-07_E02_ASAS112SP3 (2020-09-07_E02_ASAS112SP3.ab1)

cggctgggggttcagcagccagcgcctgatctggggaaccctgtggttggcatgcacatacaaatggacgaacggataaaccttttcacgcccttttaaa

1,710

1,720

1,730

1,740

1,750

1,760

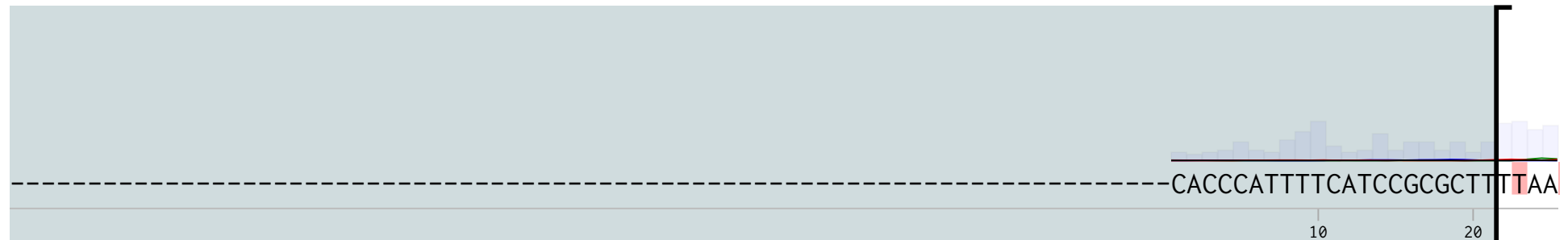
1,770

1,780

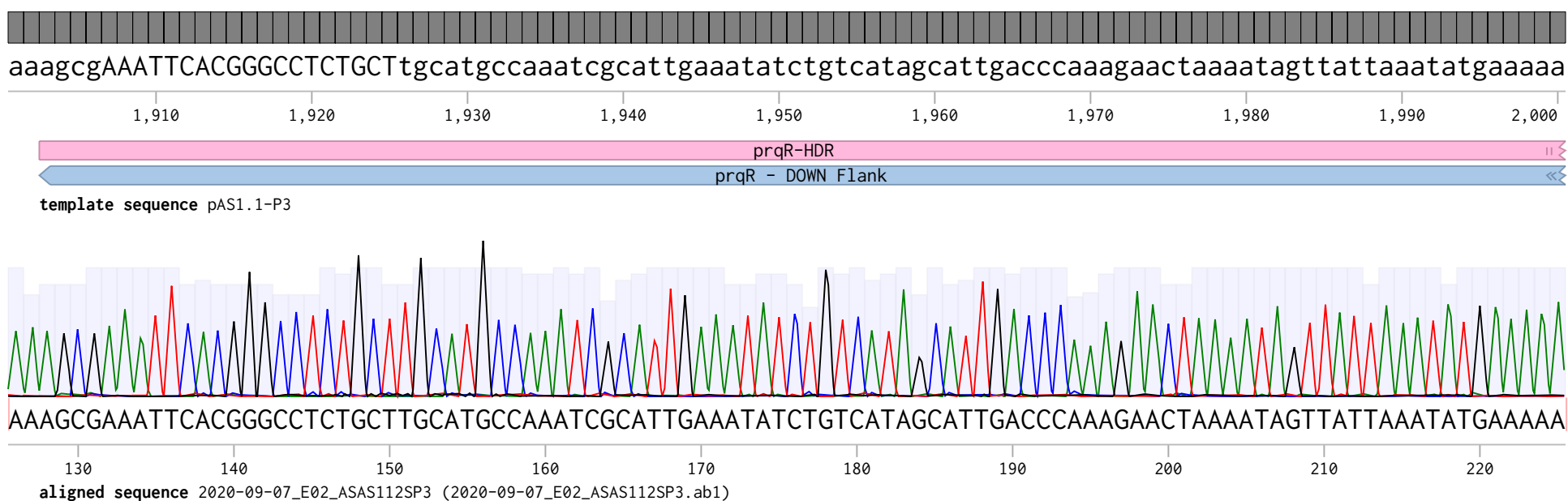
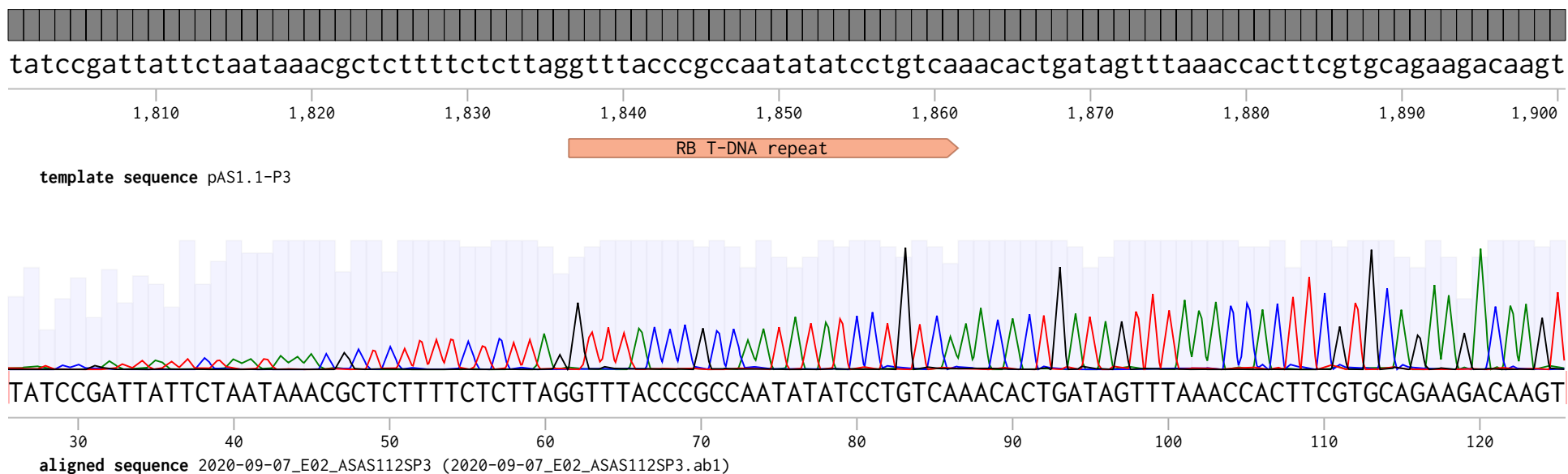
1,790

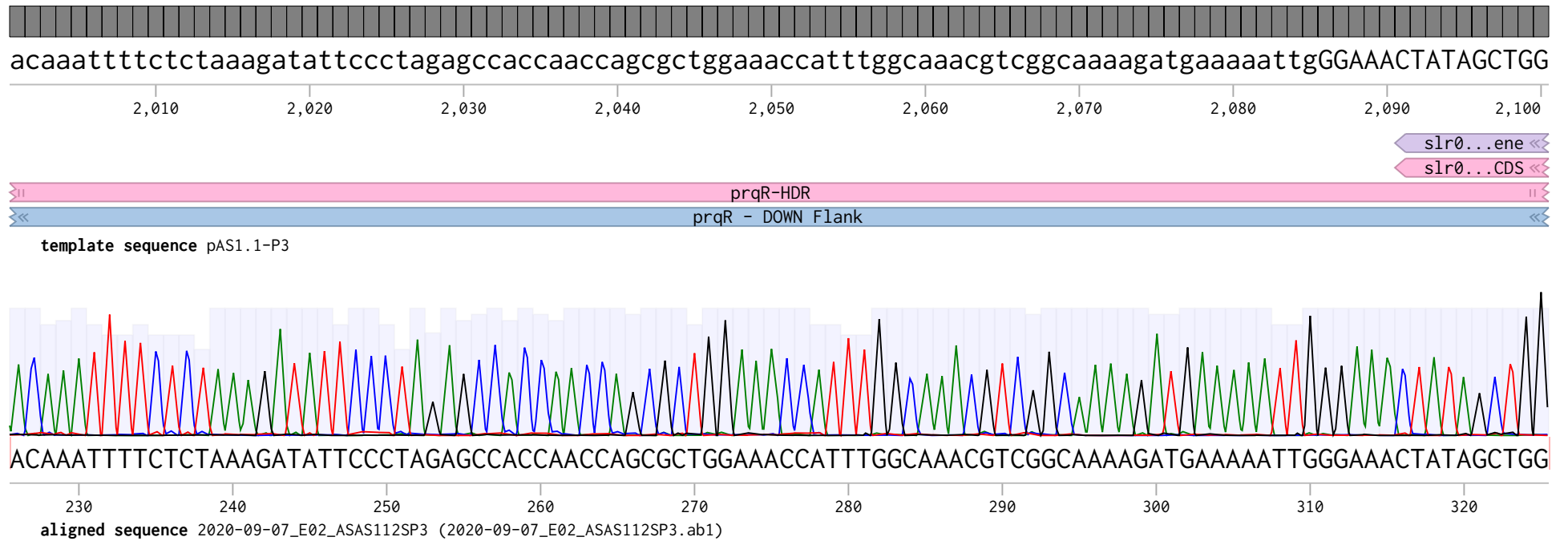
1,800

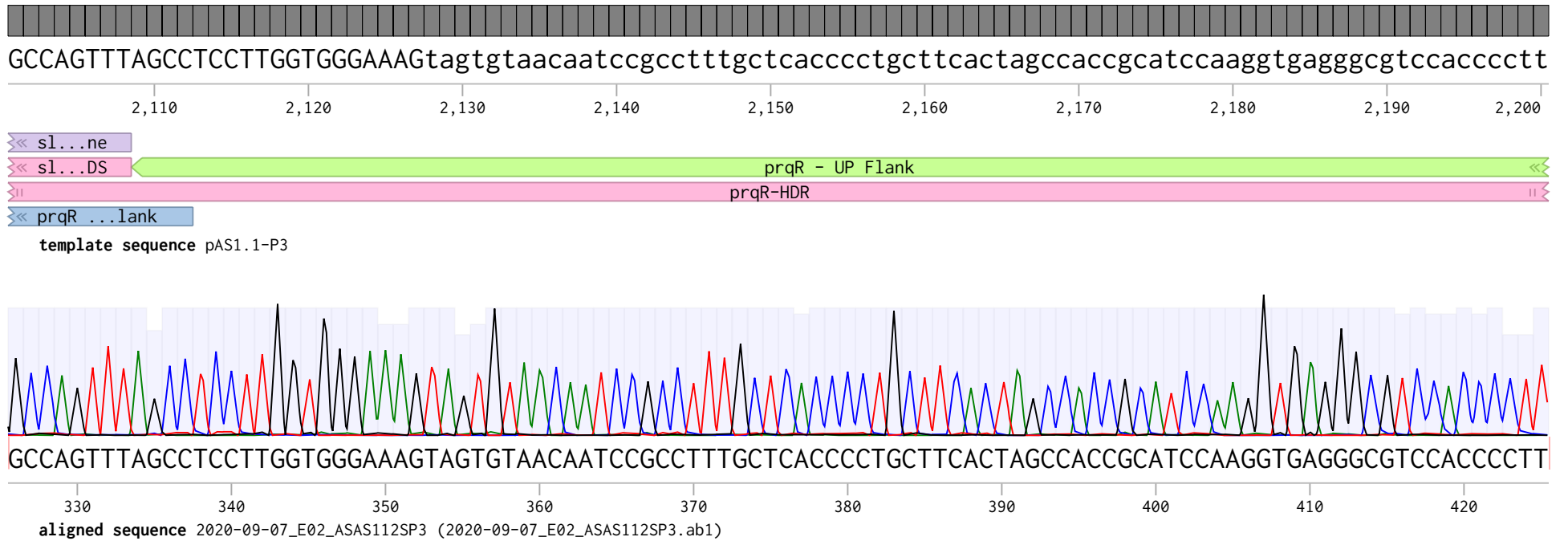
template sequence pAS1.1-P3

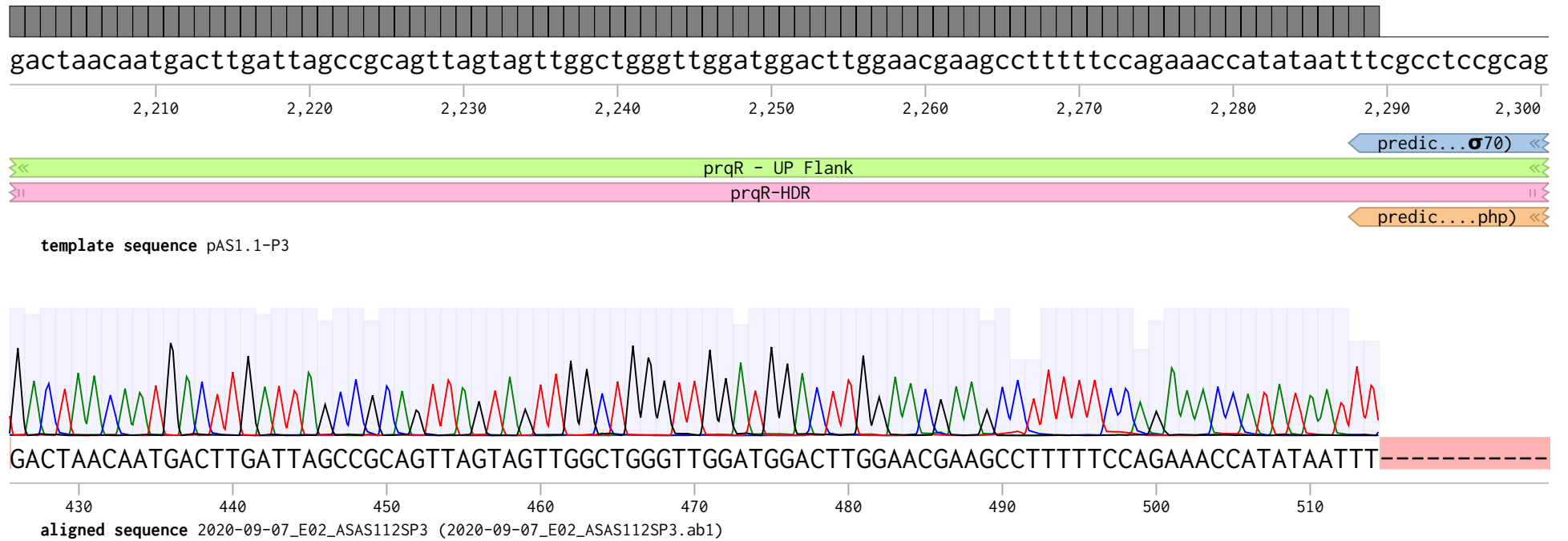


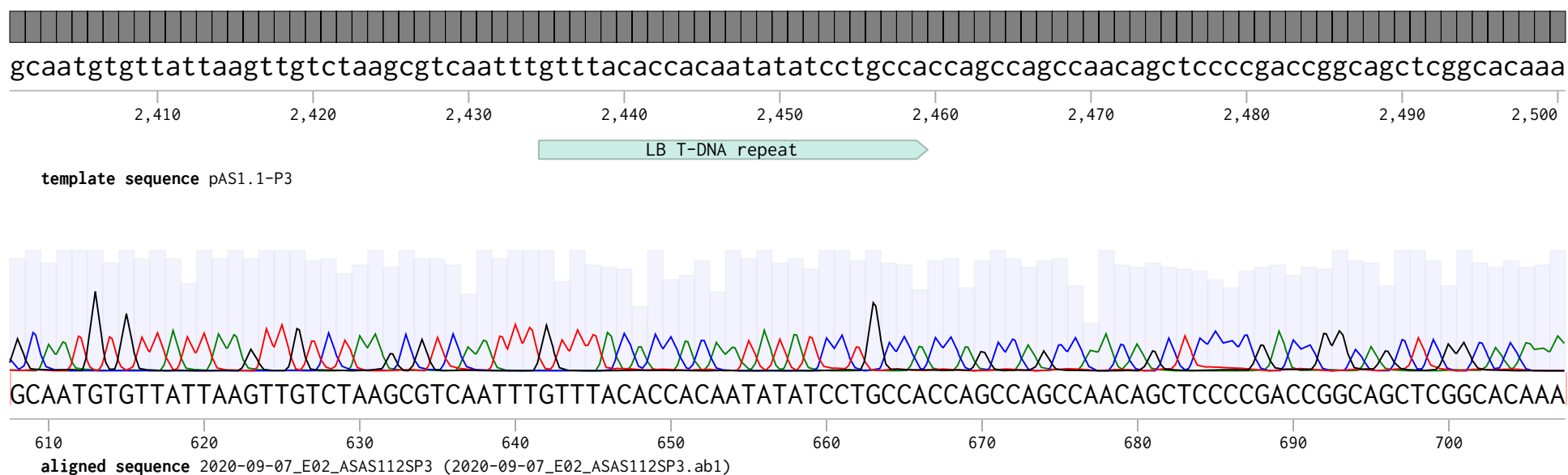
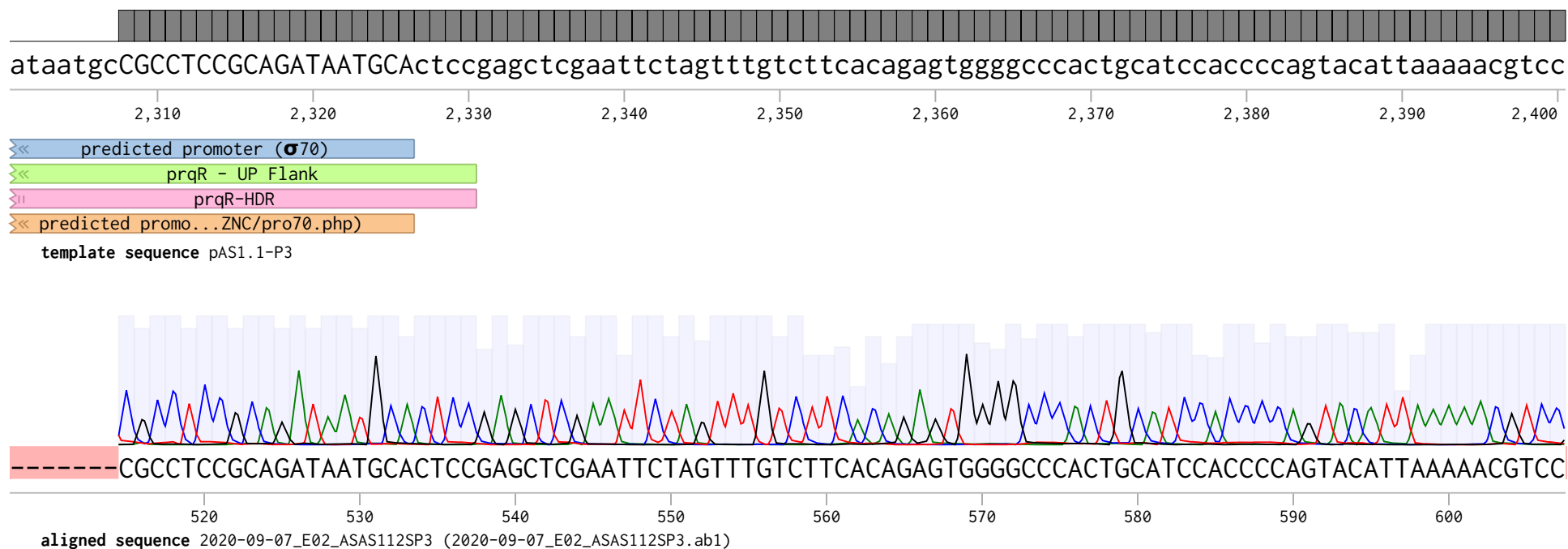
aligned sequence 2020-09-07_E02_ASAS112SP3 (2020-09-07_E02_ASAS112SP3.ab1)

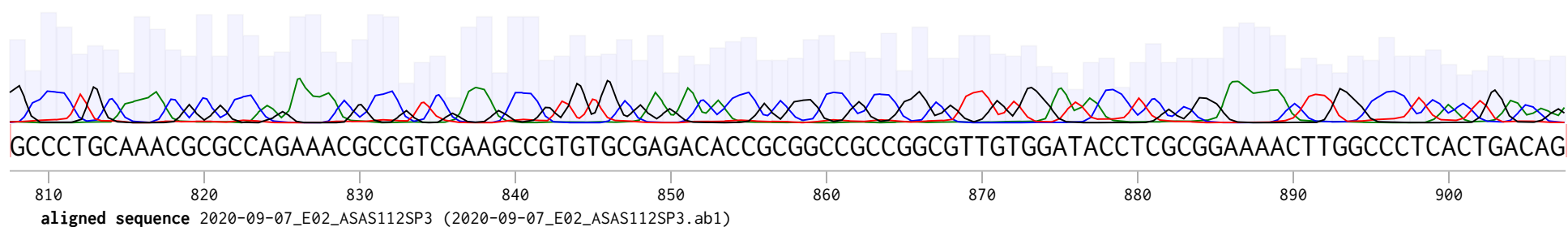
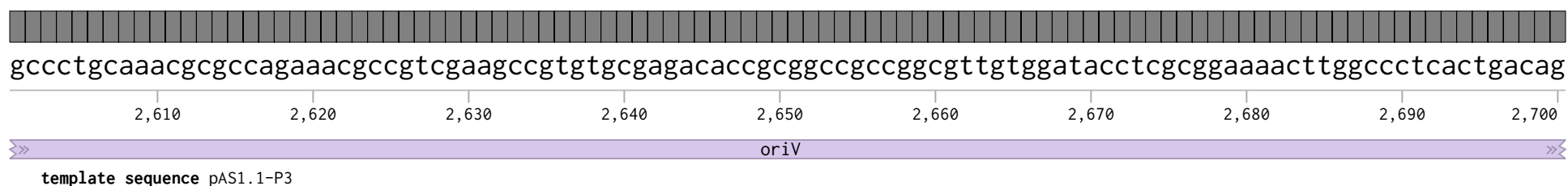
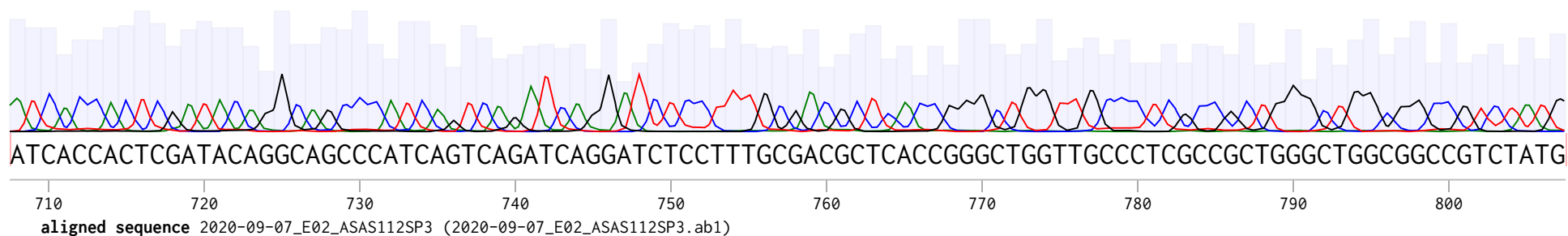
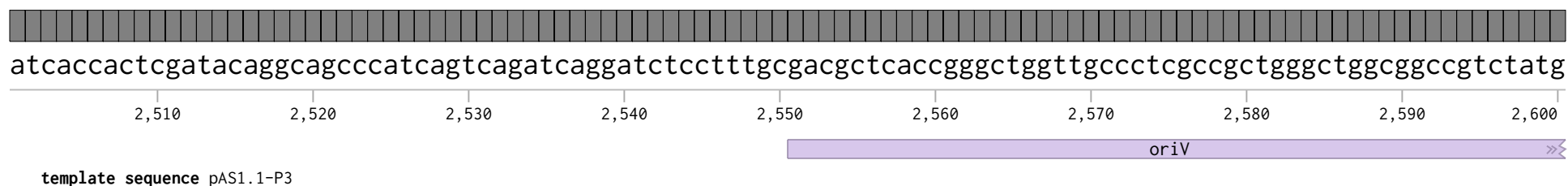


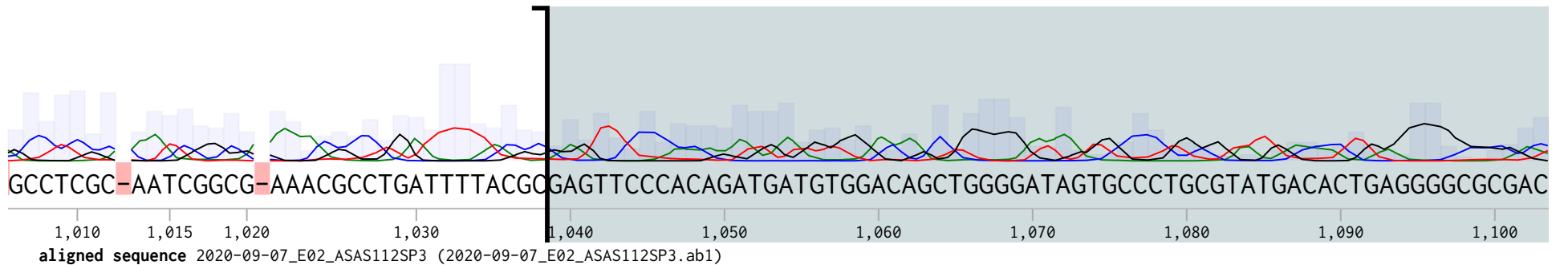
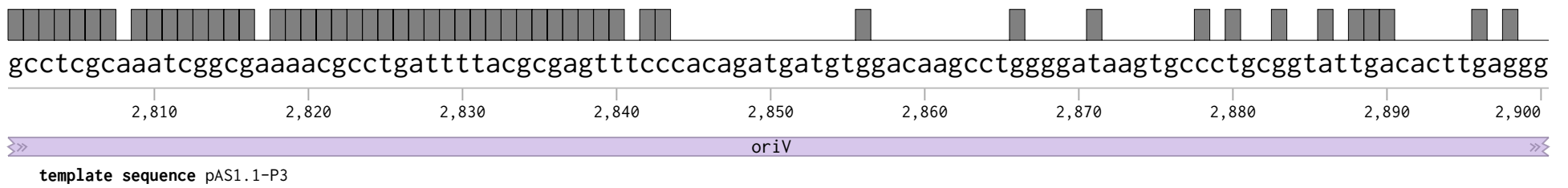
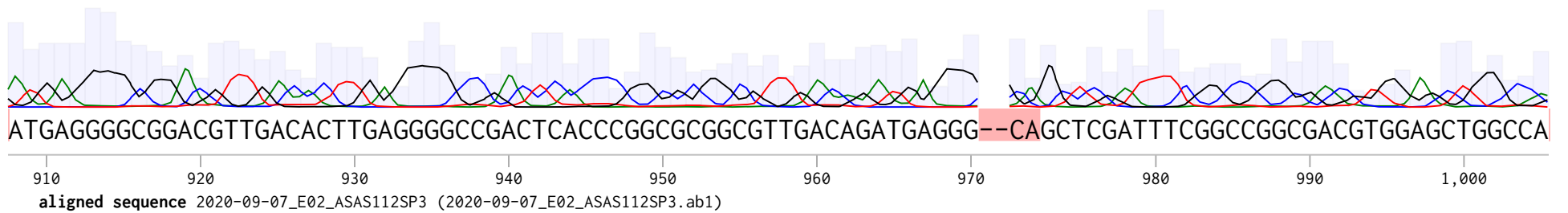
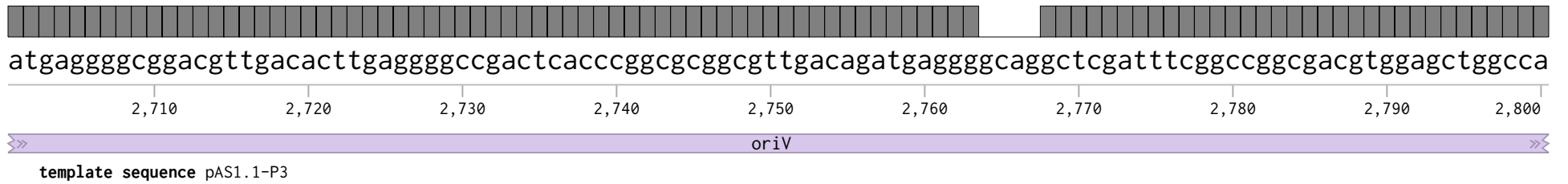


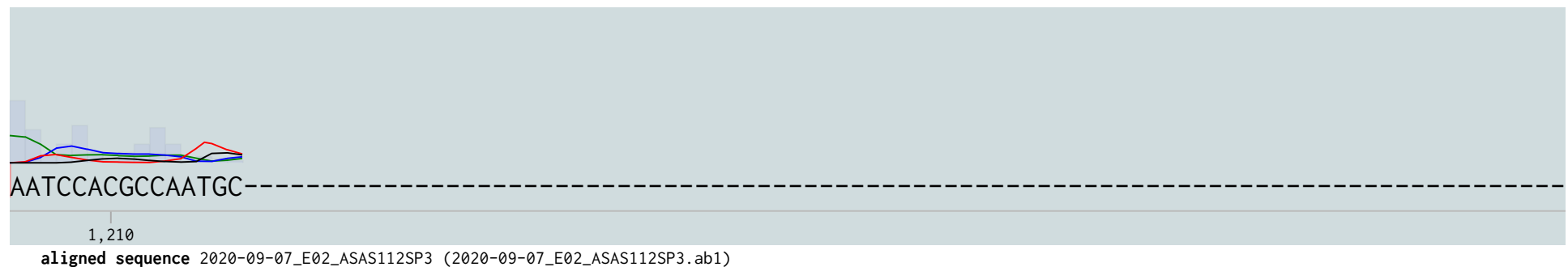
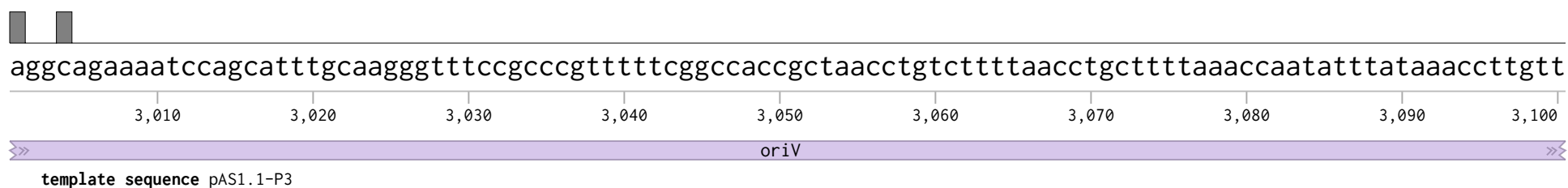
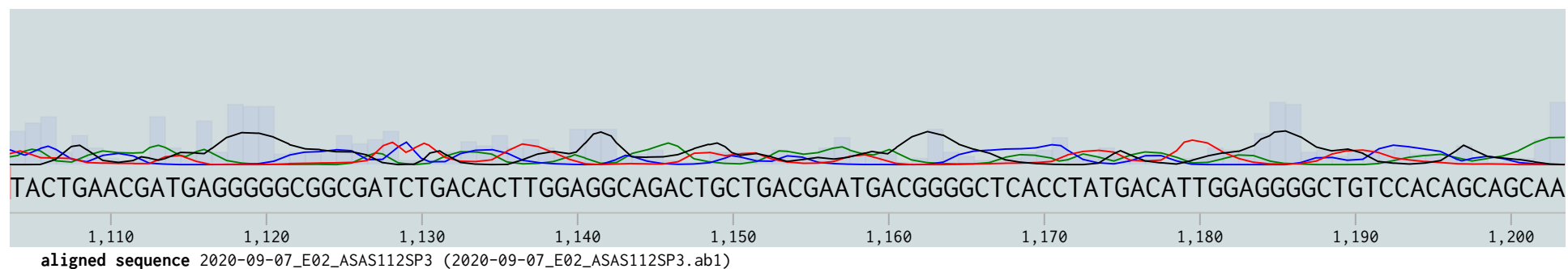
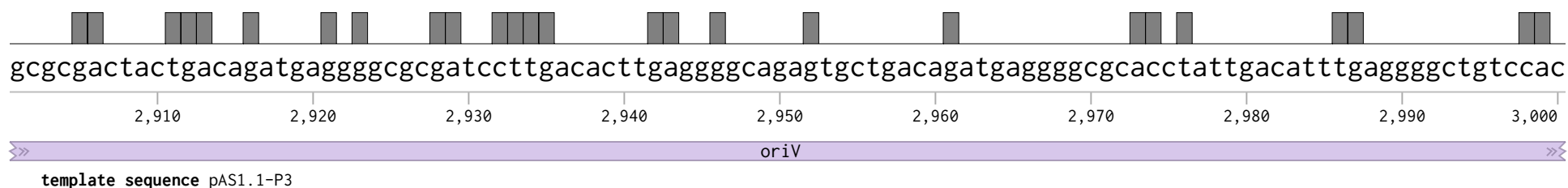






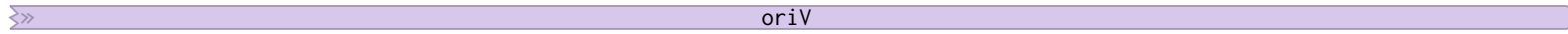




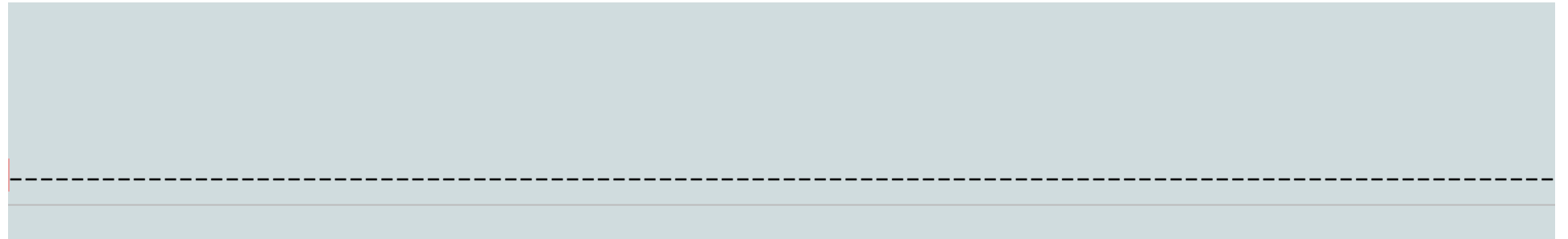


t t t a a c c a g g g c t g c g c c c t g t g c g c g t g a c c g c g c a c g c c g a a g g g g g t g c c c c c c t t c t c g a a c c c t c c c g g c c c g c t a a c g c g g g c c t c c c a t c c

3,110 3,120 3,130 3,140 3,150 3,160 3,170 3,180 3,190 3,200



template sequence pAS1.1-P3



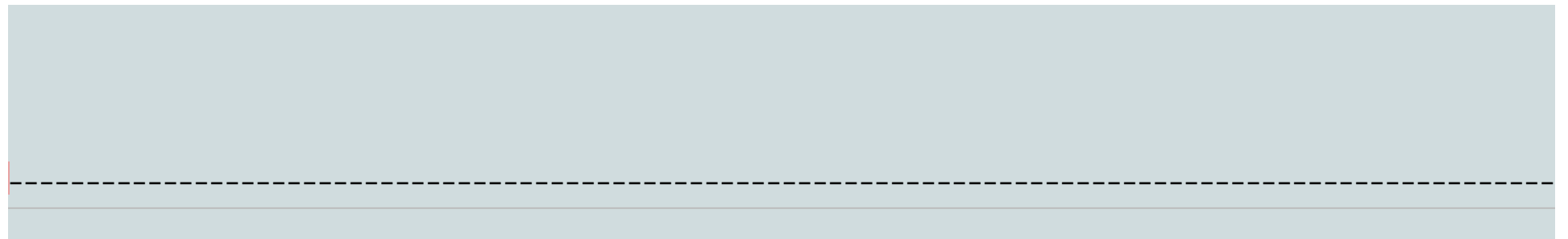
aligned sequence 2020-09-07_E02_ASAS112SP3 (2020-09-07_E02_ASAS112SP3.ab1)

c c c c a g g g g c t g c g c c c c t c g g c c g c g a a c g g c c t c a c c c c a a a a t g g c a g c g c t g g c c a a t t c g t g c g c g g a a c c c t a t t t g t t t a t t t t c t a a t

3,210 3,220 3,230 3,240 3,250 3,260 3,270 3,280 3,290 3,300



template sequence pAS1.1-P3



aligned sequence 2020-09-07_E02_ASAS112SP3 (2020-09-07_E02_ASAS112SP3.ab1)

acattcaaataatgtatccgctcatgagacaataaccctgataaatgcttcaataatattgaaaaaggaagagtatgagtattcaacatttccgtgtcgcc

3,310

3,320

3,330

3,340

3,350

3,360

3,370

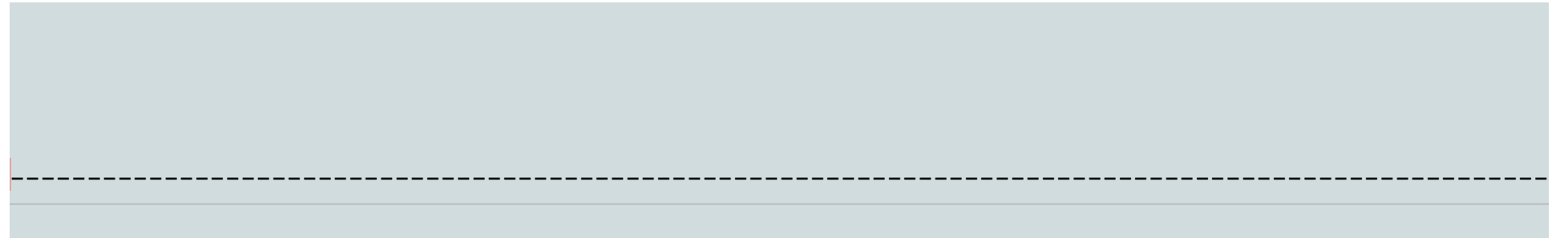
3,380

3,390

3,400



template sequence pAS1.1-P3



aligned sequence 2020-09-07_E02_ASAS112SP3 (2020-09-07_E02_ASAS112SP3.ab1)

cttattcccttttttgcggcattttgccttcctgtttttgctcaccagaaacgctggtgaaagtaaaagatgctgaagatcagttgggtgcacgagtgg

3,410

3,420

3,430

3,440

3,450

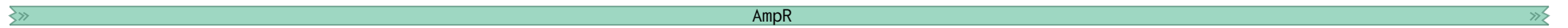
3,460

3,470

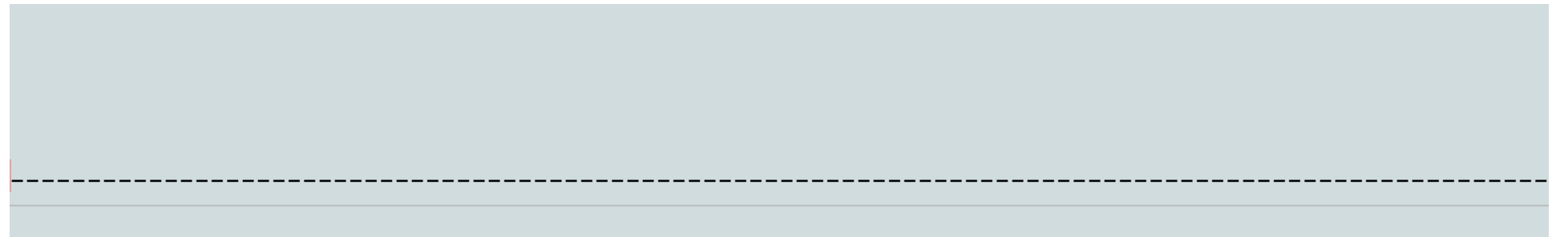
3,480

3,490

3,500



template sequence pAS1.1-P3



aligned sequence 2020-09-07_E02_ASAS112SP3 (2020-09-07_E02_ASAS112SP3.ab1)

gttacatcgaactggatctcaacagcggtaagatccttgagagttttcgccccgaagaacgttttccaatgatgagcacttttaaagttctgctatgtgg

3,510

3,520

3,530

3,540

3,550

3,560

3,570

3,580

3,590

3,600

Amp-R

AmpR

template sequence pAS1.1-P3

aligned sequence 2020-09-07_E02_ASAS112SP3 (2020-09-07_E02_ASAS112SP3.ab1)

cgcggtattatcccgtattgacgccgggcaagagcaactcggtcgccgcatacactattctcagaatgacttggttgagtactcaccagtcacagaaaag

3,610

3,620

3,630

3,640

3,650

3,660

3,670

3,680

3,690

3,700

Amp-R

AmpR

template sequence pAS1.1-P3

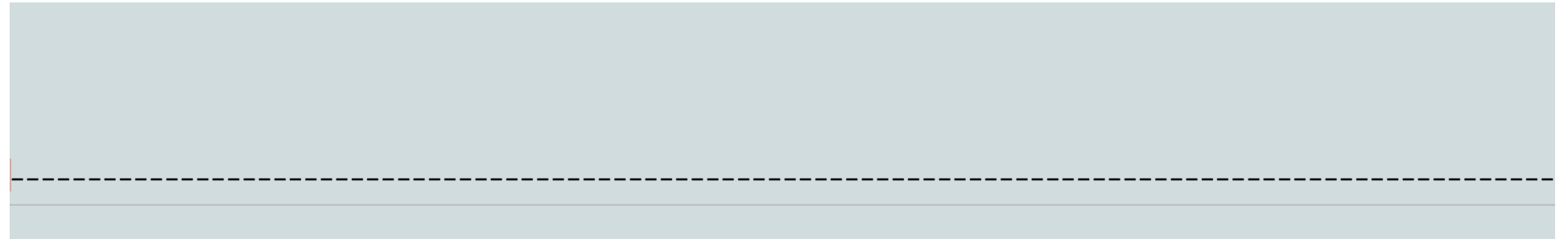
aligned sequence 2020-09-07_E02_ASAS112SP3 (2020-09-07_E02_ASAS112SP3.ab1)

catcttacggatggcatgacagtaagagaattatgcagtgctgccataacatgagtgataaacactgcggccaacttacttctgacaacgatcggaggac

3,710 3,720 3,730 3,740 3,750 3,760 3,770 3,780 3,790 3,800

>> AmpR >>

template sequence pAS1.1-P3



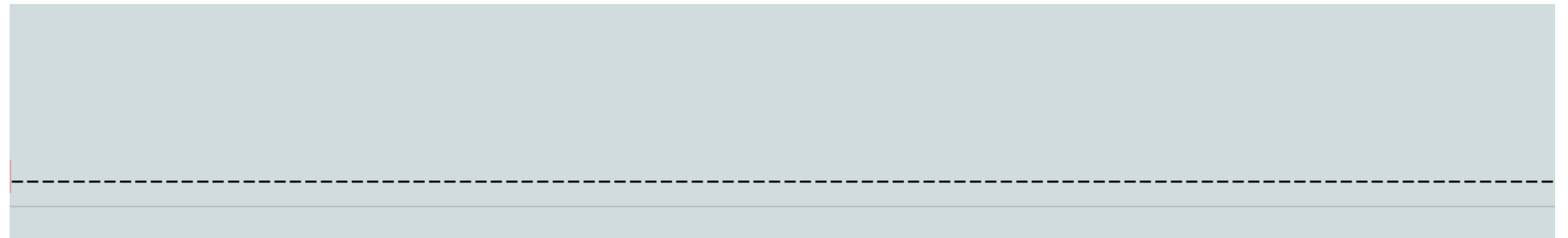
aligned sequence 2020-09-07_E02_ASAS112SP3 (2020-09-07_E02_ASAS112SP3.ab1)

cgaaggagctaaccgctttttgcacaacatgggggatcatgtaactcgccttgatcgttgggaaccggagctgaatgaagccataccaaacgacgagcg

3,810 3,820 3,830 3,840 3,850 3,860 3,870 3,880 3,890 3,900

>> AmpR >>

template sequence pAS1.1-P3



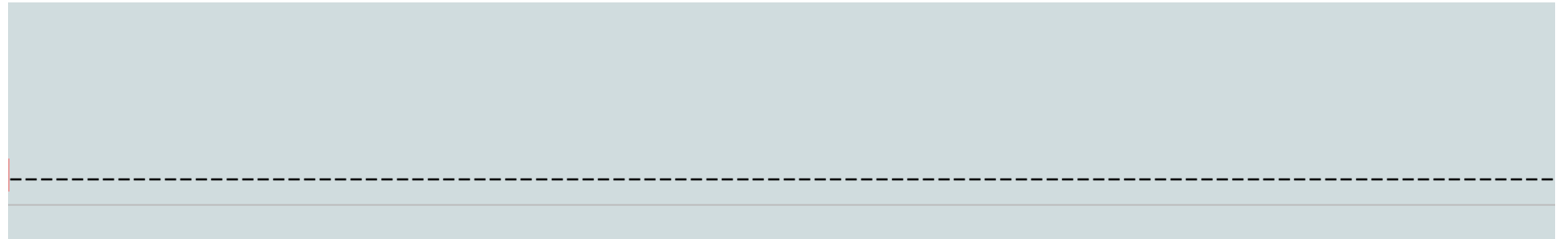
aligned sequence 2020-09-07_E02_ASAS112SP3 (2020-09-07_E02_ASAS112SP3.ab1)

t g a c a c c a c g a t g c c t g t a g c a a t g g c a a c a c g t t g c g c a a a c t a t t a a c t g g c g a a c t a c t t a c t c t a g c t t c c c g g c a a c a a t t a a t a g a c t g g a t g

3,910 3,920 3,930 3,940 3,950 3,960 3,970 3,980 3,990 4,000

>> AmpR >>

template sequence pAS1.1-P3



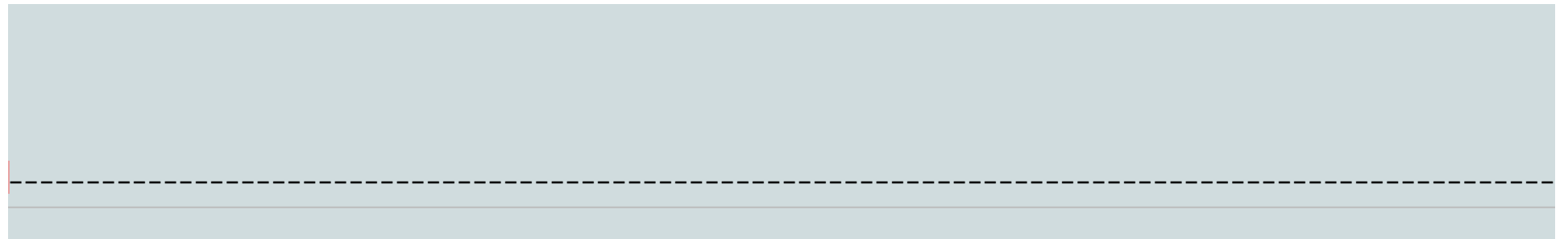
aligned sequence 2020-09-07_E02_ASAS112SP3 (2020-09-07_E02_ASAS112SP3.ab1)

g a g g c g g a t a a a g t t g c a g g a c c a c t t c t g c g c t c g g c c c t t c c g g c t g g c t g g t t t a t t g c t g a t a a a t c t g g a g c c g g t g a g c g t g g t t c t c g c g g t a

4,010 4,020 4,030 4,040 4,050 4,060 4,070 4,080 4,090 4,100

>> AmpR >>

template sequence pAS1.1-P3



aligned sequence 2020-09-07_E02_ASAS112SP3 (2020-09-07_E02_ASAS112SP3.ab1)

tcattgcagcactggggccagatggtaagccctcccgtagttagttatctacacgacggggagtcaggcaactatggatgaacgaaatagacagatcgc

4,110

4,120

4,130

4,140

4,150

4,160

4,170

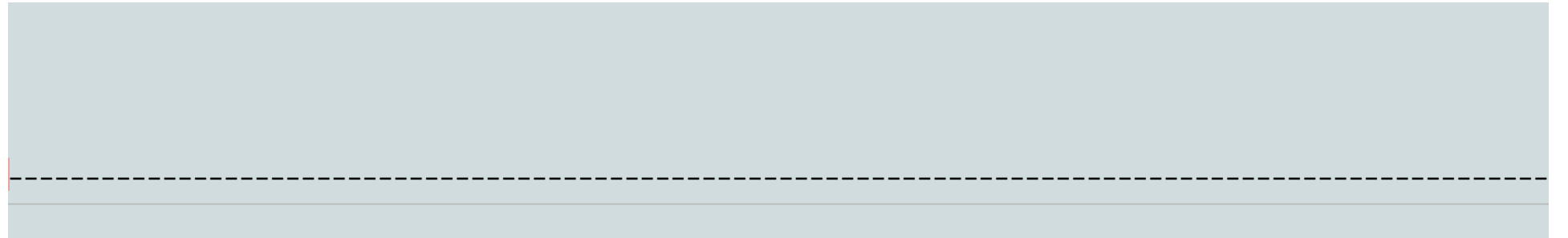
4,180

4,190

4,200

>> AmpR >>

template sequence pAS1.1-P3



aligned sequence 2020-09-07_E02_ASAS112SP3 (2020-09-07_E02_ASAS112SP3.ab1)

tgagataggtgcctcactgattaagcattggtaactgtcagaccaagtttactcatatatacttttagattgatttaaaacttcatttttaatttaaagg

4,210

4,220

4,230

4,240

4,250

4,260

4,270

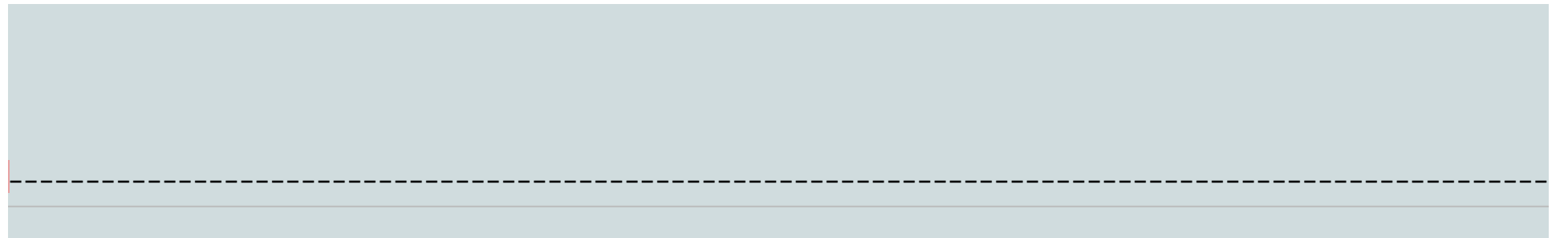
4,280

4,290

4,300

>> AmpR >

template sequence pAS1.1-P3



aligned sequence 2020-09-07_E02_ASAS112SP3 (2020-09-07_E02_ASAS112SP3.ab1)

atctaggtgaagatcctttttgataatctcatgacaaaaatcccttaacgtgagttttcgttccactgagcggtcagaccccgtagaaaagatcaaaggat

4,310 4,320 4,330 4,340 4,350 4,360 4,370 4,380 4,390 4,400

template sequence pAS1.1-P3

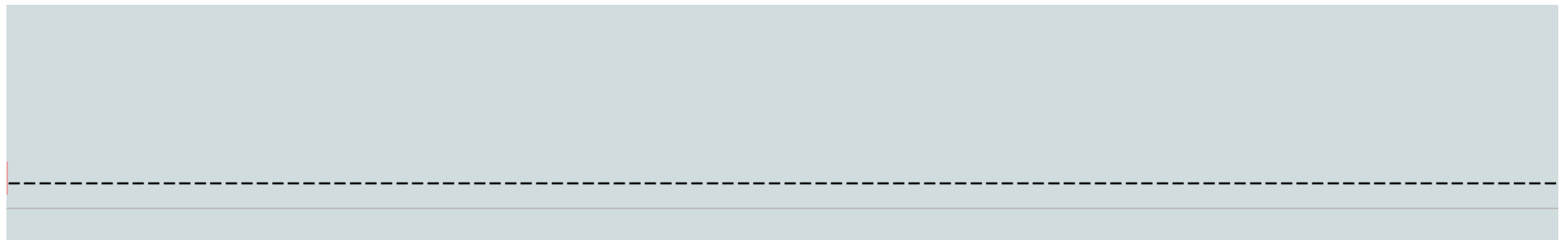


cttcttgagatccttttttctgcgcgtaatctgctgcttgcaaacaaaaaaaccaccgctaccagcggtggtttgttgcccggatcaagagctaccaac

4,410 4,420 4,430 4,440 4,450 4,460 4,470 4,480 4,490 4,500

ori

template sequence pAS1.1-P3



tctttttccgaaggtaactggcttcagcagagcgcagataccaaatactgtccttctagtgtagccgtagttaggccaccacttcaagaactctgtagca

4,510

4,520

4,530

4,540

4,550

4,560

4,570

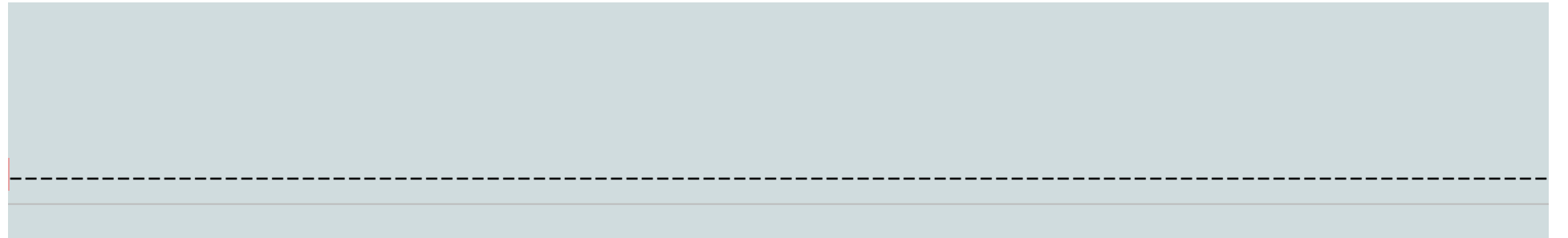
4,580

4,590

4,600

>> ori >>

template sequence pAS1.1-P3



aligned sequence 2020-09-07_E02_ASAS112SP3 (2020-09-07_E02_ASAS112SP3.ab1)

cgcctacatacctcgctctgctaatacctgttaccagtggctgctgccagtggcgataagtcgtgtcttaccgggttggaactcaagacgatagttaccgg

4,610

4,620

4,630

4,640

4,650

4,660

4,670

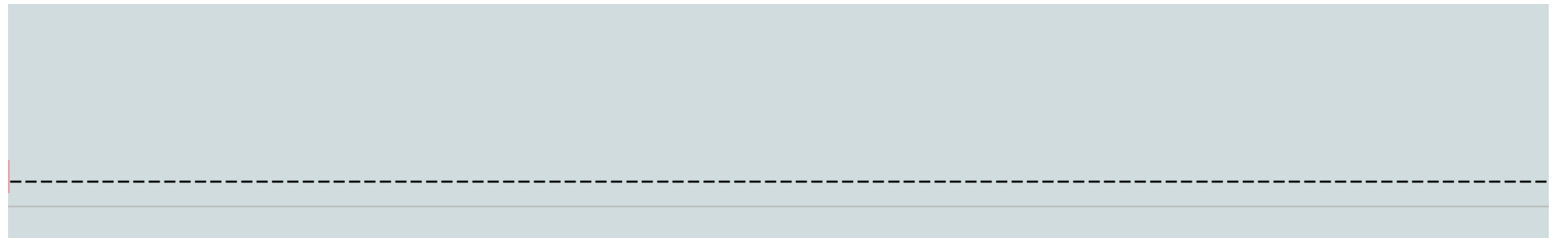
4,680

4,690

4,700

>> ori >>

template sequence pAS1.1-P3



aligned sequence 2020-09-07_E02_ASAS112SP3 (2020-09-07_E02_ASAS112SP3.ab1)

ataaggcgcagcggtcgggctgaacggggggttcgtgcacacagcccagcttggagcgaacgacctacaccgaactgagatacctacagcgtgagc

4,710

4,720

4,730

4,740

4,750

4,760

4,770

4,780

4,790

>> ori >>

template sequence pAS1.1-P3

aligned sequence 2020-09-07_E02_ASAS112SP3 (2020-09-07_E02_ASAS112SP3.ab1)