

Template Alignment: 2020-11-13_E02_ASAS18BSP4

agtatattgggcaaggggtcgctggtattcgtgcagggcaagattcggaataccaagtacgagaaggacggccagacgggtctacgggaccgacttcattgc

10 20 30 40 50 60 70 80 90 100
template sequence pAS1.8 (prqA-gRNA-1)

aligned sequence 2020-11-13_E02_ASAS18BSP4

cgataagggtggattatctggacaccaaggcaccaggcgggtcaaatacaggaataagggcacattgccccggcgtgagtcgggggcaatcccgaaggaggg

110 120 130 140 150 160 170 180 190 200
template sequence pAS1.8 (prqA-gRNA-1)

aligned sequence 2020-11-13_E02_ASAS18BSP4

tgaatgaatcggacgtttgaccggaaggcatacaggcaagaactgatcgacgcgggggtttccgccgaggatgccgaaaccatcgcaagccgcaccgtca

210 220 230 240 250 260 270 280 290 300

trfA

template sequence pAS1.8 (prqA-gRNA-1)

aligned sequence 2020-11-13_E02_ASAS18BSP4

tgcgtgcgccccgcgaaaccttccagtcggtcgcgatggtccagcaagctacggccaagatcgagcgcgacagcgtgcaactggctccccctgcccct

310 320 330 340 350 360 370 380 390 400

trfA

template sequence pAS1.8 (prqA-gRNA-1)

aligned sequence 2020-11-13_E02_ASAS18BSP4

gcccgcgccatcggccgccgtggagcgttcgcgtcgtcttgaacaggaggcggcagggttggcgaagtcgatgaccatcgacacgcgaggaactatgacg

410

420

430

440

450

460

470

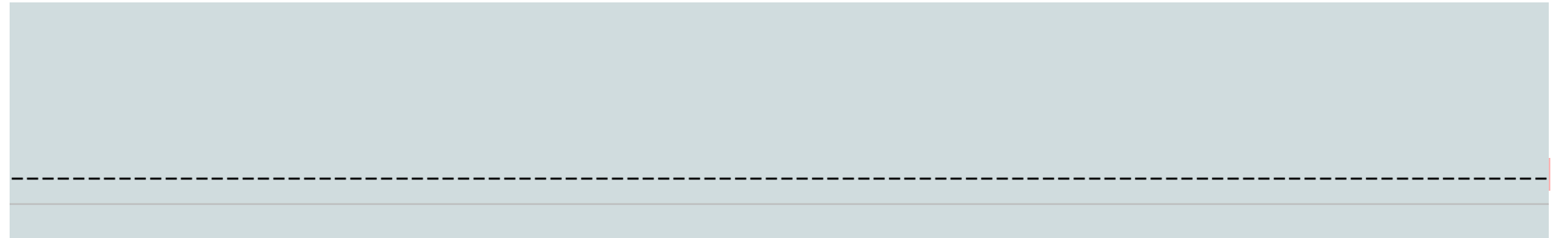
480

490

500

» trfA »

template sequence pAS1.8 (prqA-gRNA-1)



aligned sequence 2020-11-13_E02_ASAS18BSP4

accaagaagcgaaaaaccgccggcgaggacctggcaaaacaggtcagcgaggccaagcaggccgcgttgctgaaacacacgaagcagcagatcaaggaaa

510

520

530

540

550

560

570

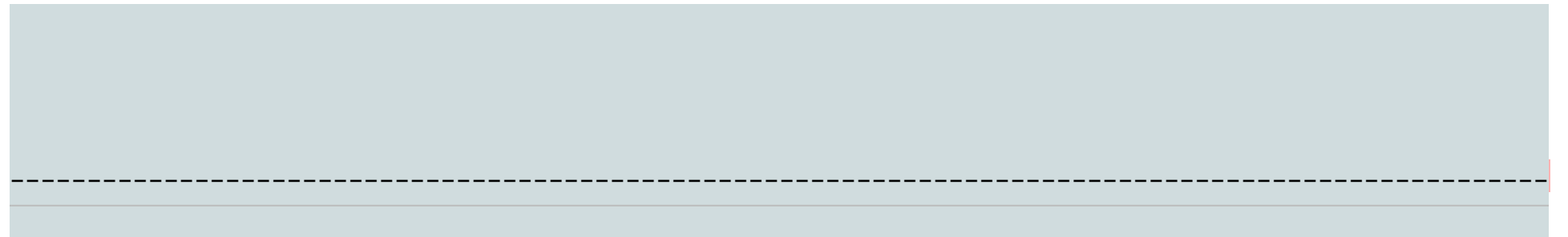
580

590

600

» trfA »

template sequence pAS1.8 (prqA-gRNA-1)



aligned sequence 2020-11-13_E02_ASAS18BSP4

tgacgctttccttggttcgatattgcgccgtggccggacacgatgcgagcgatgccaaacgacacggcccgcctctgccctgttcaccacgcgcaacaagaa

610

620

630

640

650

660

670

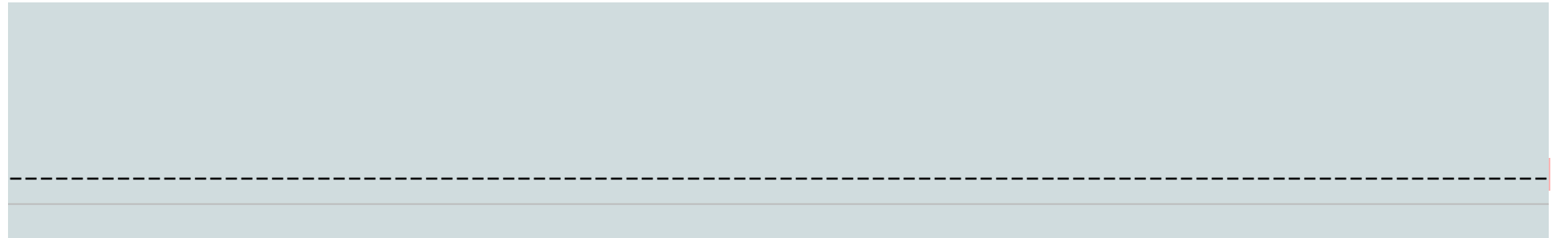
680

690

700

>> trfA >>

template sequence pAS1.8 (prqA-gRNA-1)



aligned sequence 2020-11-13_E02_ASAS18BSP4

aatcccgcgcgaggcgctgcaaaacaagggtcattttccacgtcaacaaggacgtgaagatcacctacaccggcgctcgagctgcgggcccgcgatgacgaa

710

720

730

740

750

760

770

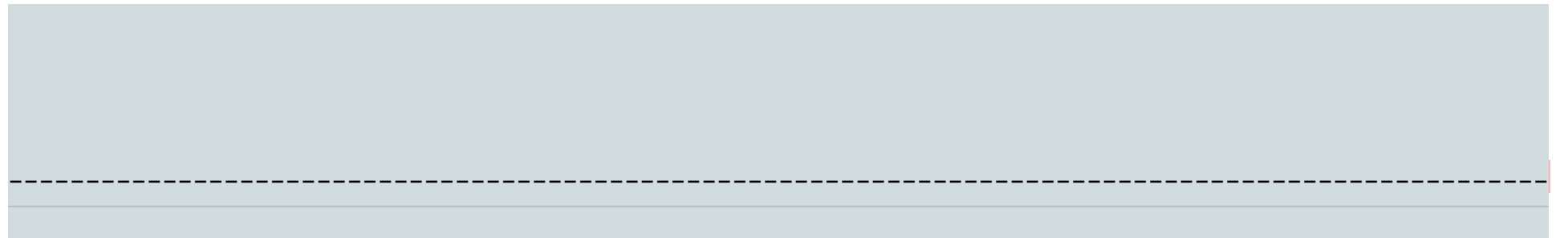
780

790

800

>> trfA >>

template sequence pAS1.8 (prqA-gRNA-1)



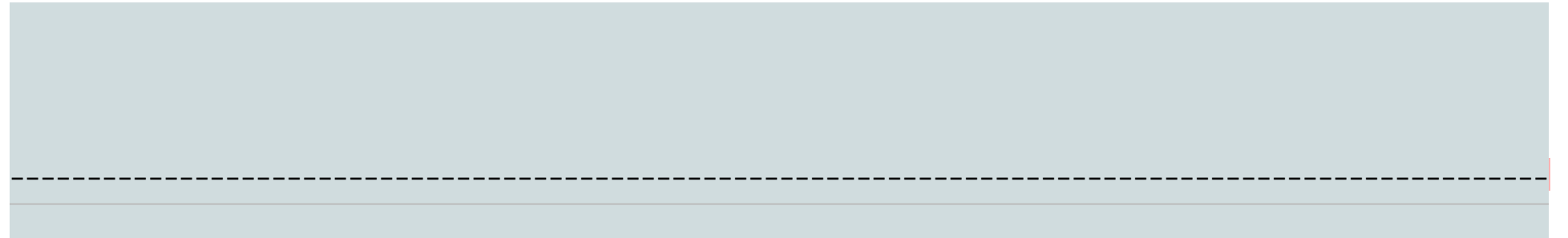
aligned sequence 2020-11-13_E02_ASAS18BSP4

ctggtgtggcagcaggtgttggagtacgcgaagcgcacccctatcggcgagccgatcaccttcacgttctacgagctttgccaggacctgggctgggtcga

810 820 830 840 850 860 870 880 890 900

>> trfA >>

template sequence pAS1.8 (prqA-gRNA-1)



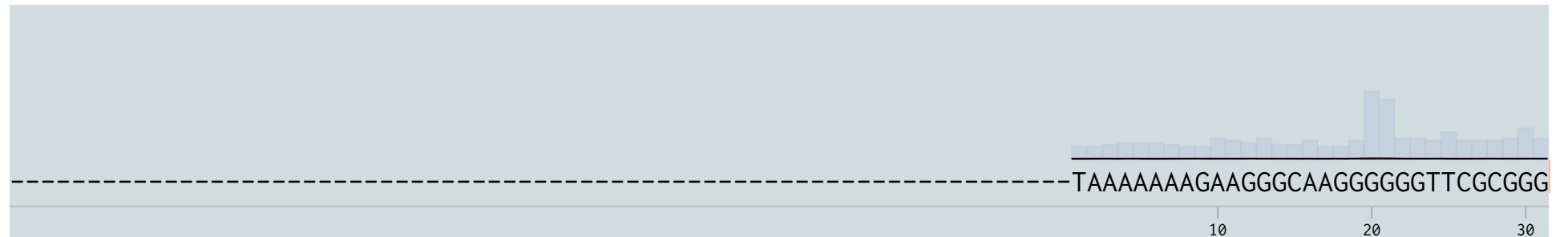
aligned sequence 2020-11-13_E02_ASAS18BSP4

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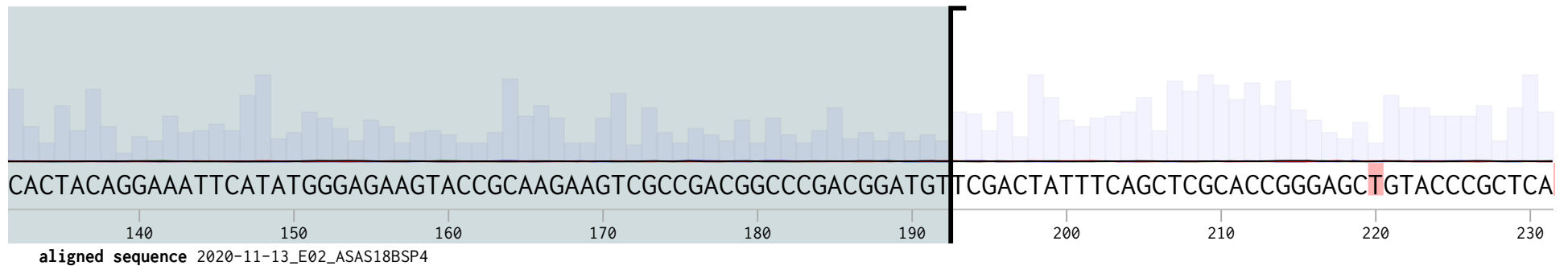
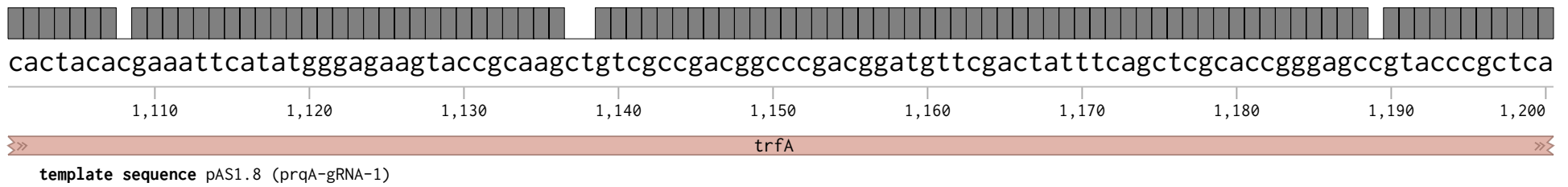
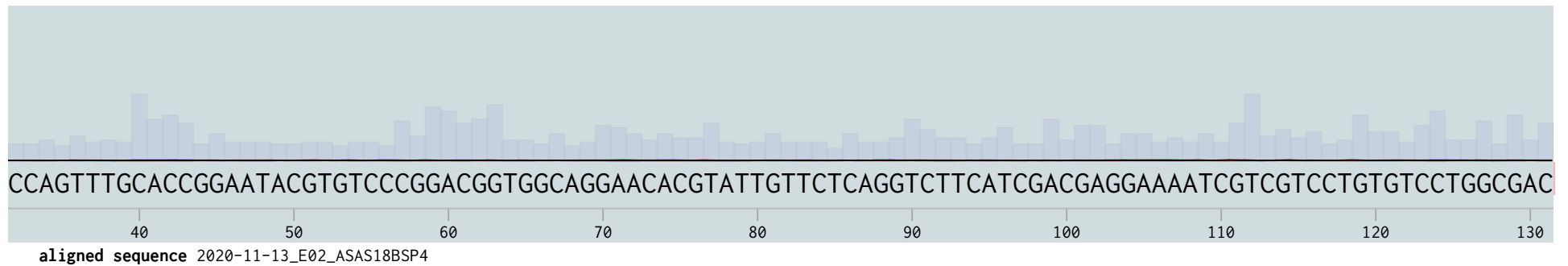
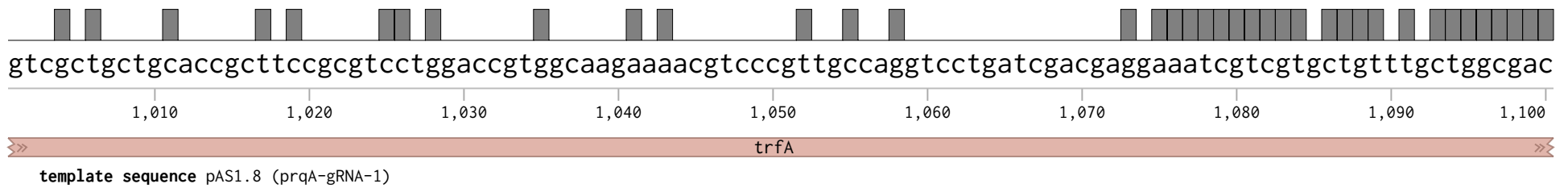
910 920 930 940 950 960 970 980 990 1,000

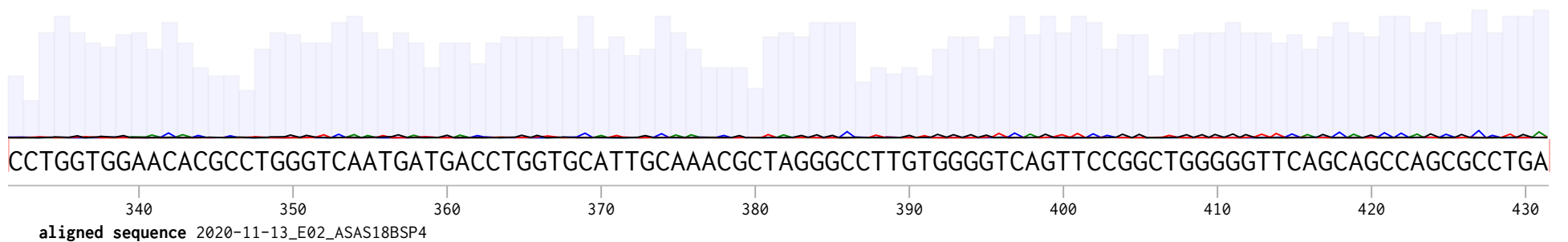
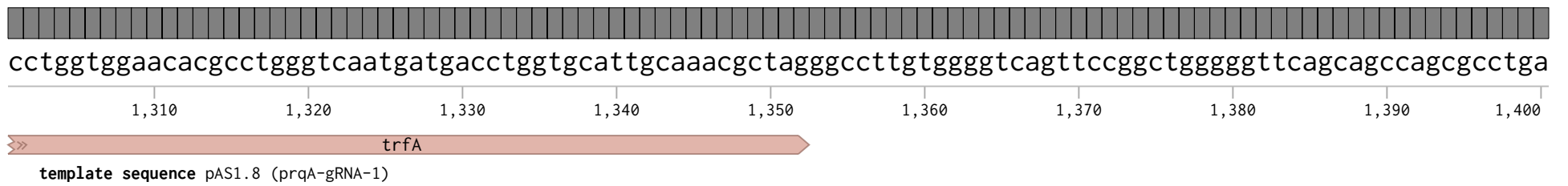
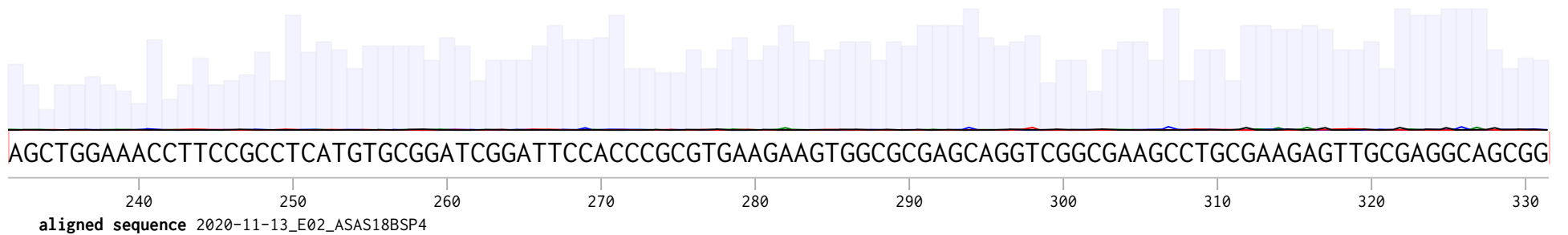
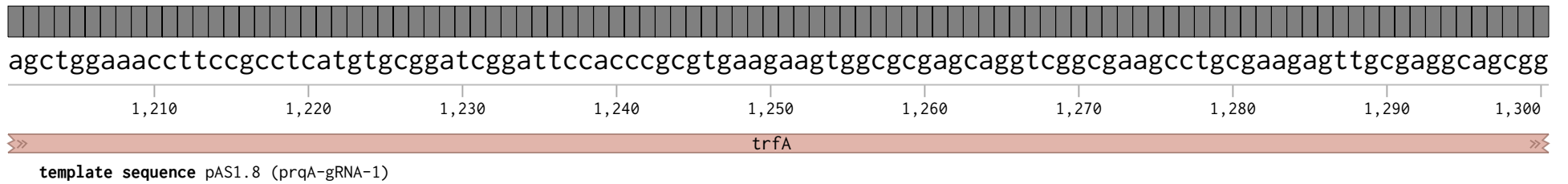
>> trfA >>

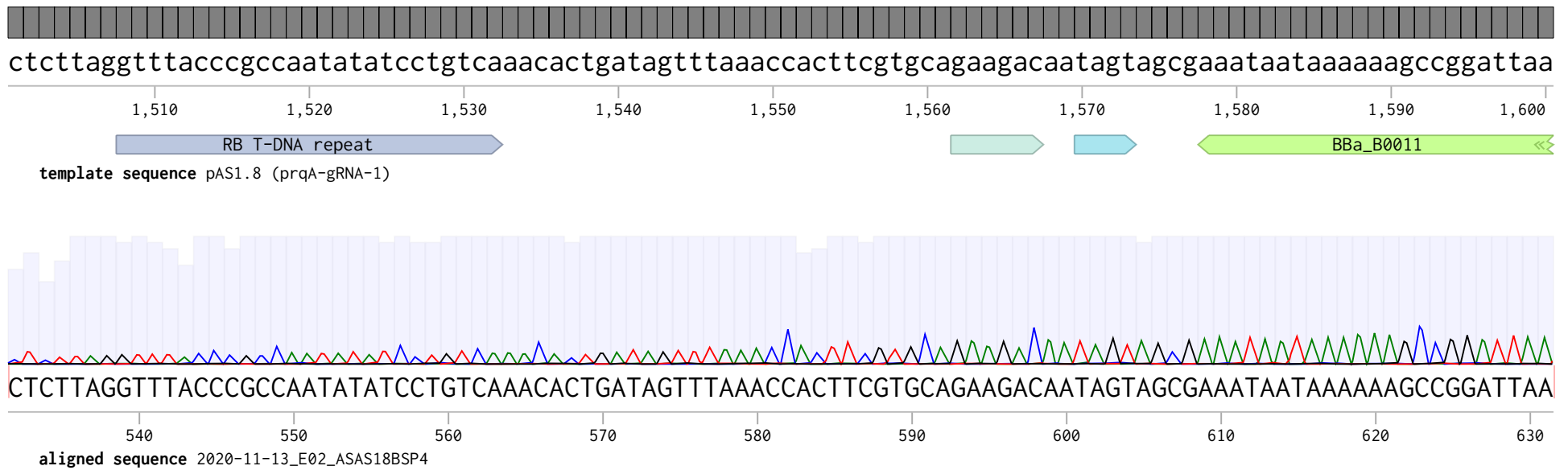
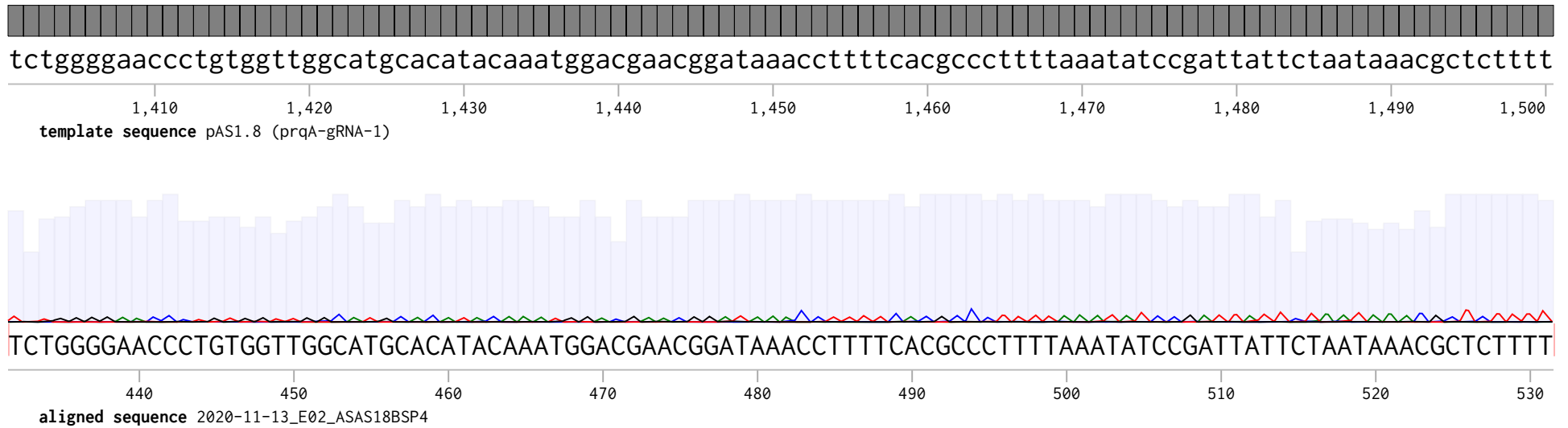
template sequence pAS1.8 (prqA-gRNA-1)

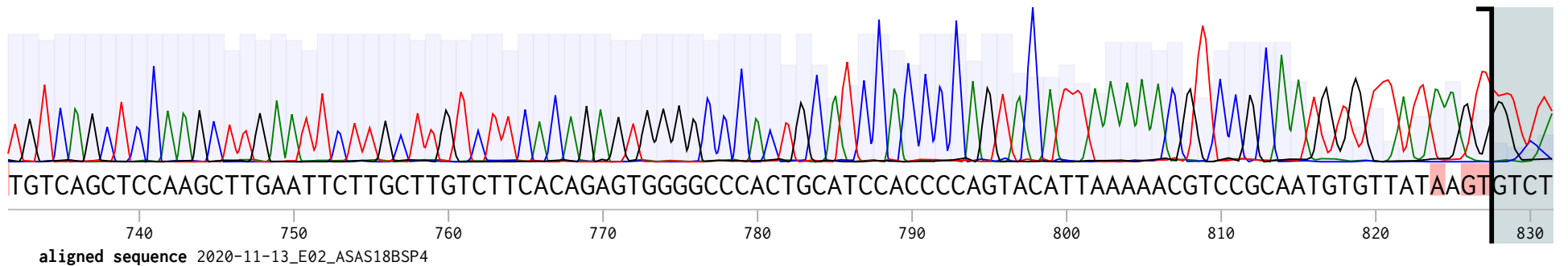
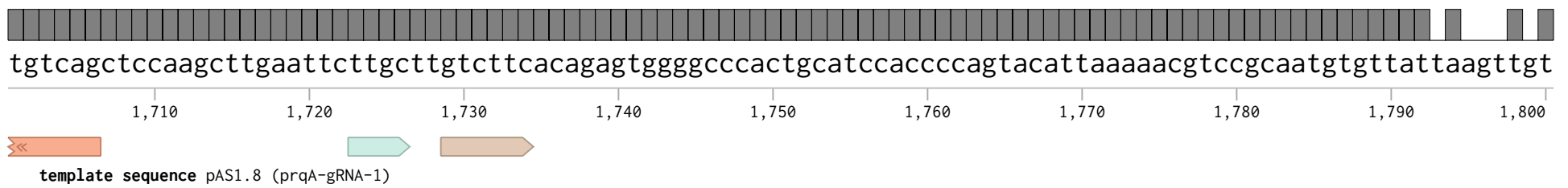
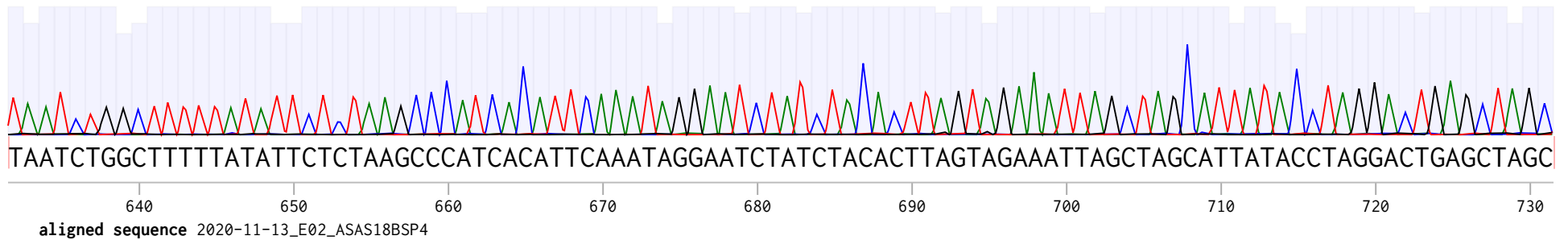
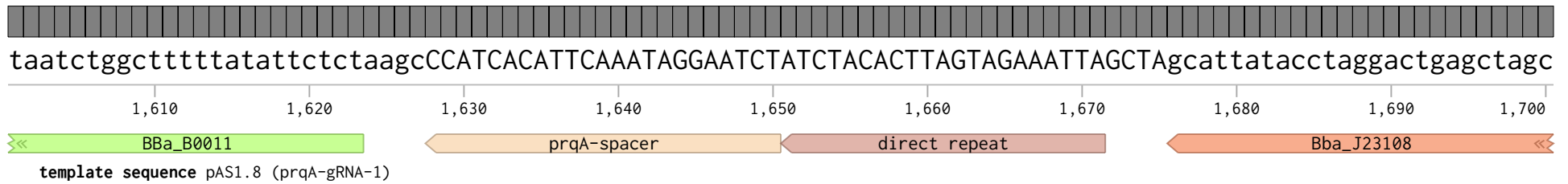


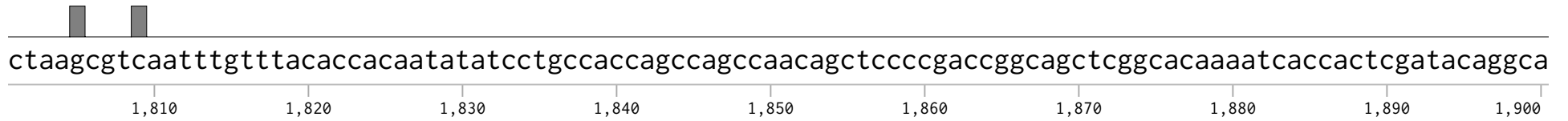
aligned sequence 2020-11-13_E02_ASAS18BSP4











acgccgtcgaagccgtgtgcgagacaccgcggccgcccggcgttgtggatacctcgcggaacttggccctcactgacagatgaggggcggacgttgaca

2,010

2,020

2,030

2,040

2,050

2,060

2,070

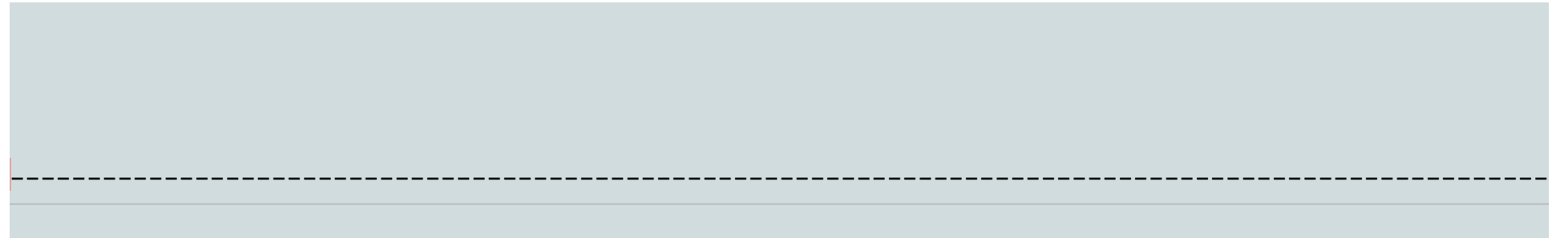
2,080

2,090

2,100

>> oriV >>

template sequence pAS1.8 (prqA-gRNA-1)



cttgaggggccgactcaccggcgcgggcgttgacagatgaggggcaggctcgatttcggccggcgacgtggagctggccagcctcgcaaatcggcgaaaa

2,110

2,120

2,130

2,140

2,150

2,160

2,170

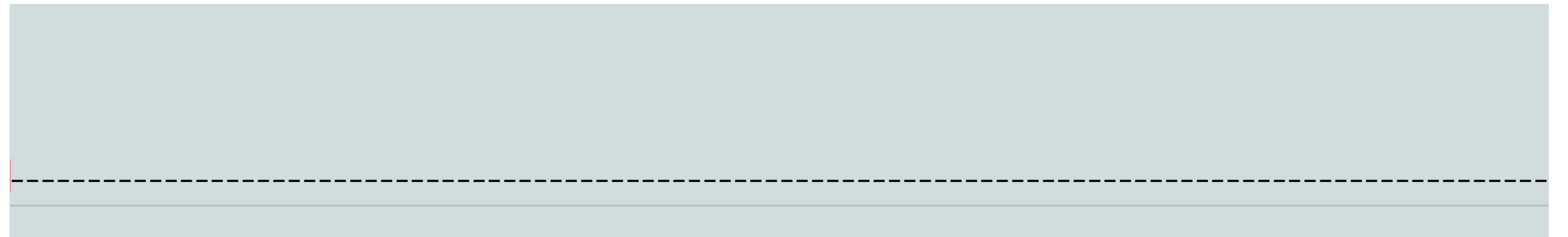
2,180

2,190

2,200

>> oriV >>

template sequence pAS1.8 (prqA-gRNA-1)



cgcctgattttacgcgagtttccacagatgatgtggacaagcctggggataagtgccctgcggtattgacacttgaggggcgcgactactgacagatga

2,210

2,220

2,230

2,240

2,250

2,260

2,270

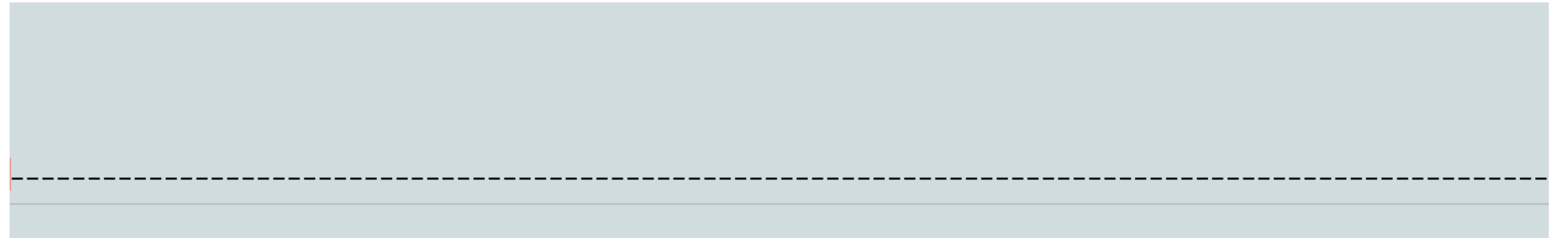
2,280

2,290

2,300

>> oriV >>

template sequence pAS1.8 (prqA-gRNA-1)



ggggcgcgatccttgacacttgaggggcagagtgctgacagatgaggggcgcacctattgacatttgaggggctgtccacaggcagaaaatccagcattt

2,310

2,320

2,330

2,340

2,350

2,360

2,370

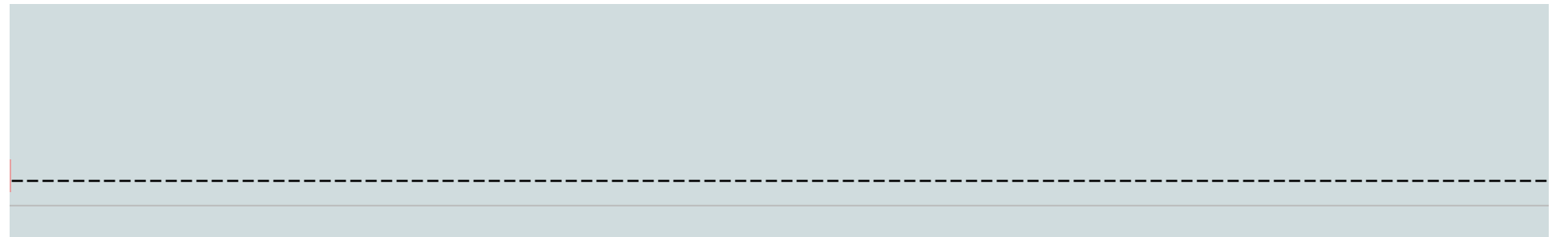
2,380

2,390

2,400

>> oriV >>

template sequence pAS1.8 (prqA-gRNA-1)



gcaaggggtttccgcccgtttttcggccaccgctaacctgtcttttaacctgcttttaaccaatatattataaaccttgtttttaaccagggtgcgcctt

2,410

2,420

2,430

2,440

2,450

2,460

2,470

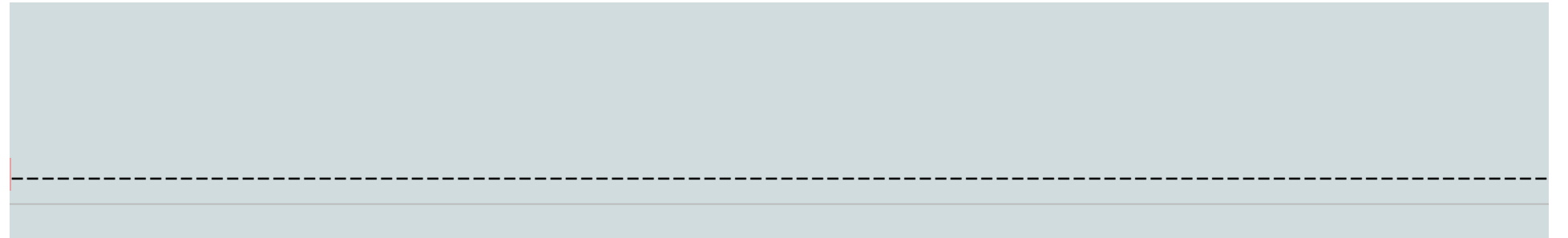
2,480

2,490

2,500

oriV

template sequence pAS1.8 (prqA-gRNA-1)



gtgcgcgtgaccgcgcacgccgaaggggggtgcccccttctcgaaccctcccgcccgctaacgcgggcctcccatccccccagggtgcgcccctc

2,510

2,520

2,530

2,540

2,550

2,560

2,570

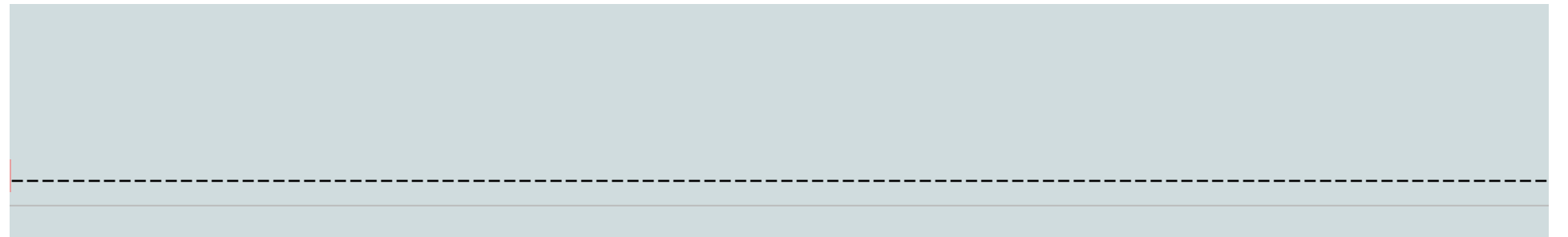
2,580

2,590

2,600

oriV

template sequence pAS1.8 (prqA-gRNA-1)



ggccgcgaacggcctcaccaccaaaaatggcagcgctggccaattcgtgcgcggaaccctatTTTgtttatTTTTttaaatacattcaaatatgtatccgc

2,610

2,620

2,630

2,640

2,650

2,660

2,670

2,680

2,690

2,700

AmpR promoter

template sequence pAS1.8 (prqA-gRNA-1)

aligned sequence 2020-11-13_E02_ASAS18BSP4

tcatgagacaataaccctgataaatgcttcaataatattgaaaaaggaagagtatgagtattcaacatttccgtgtcgcccttattccctTTTTtgcggc

2,710

2,720

2,730

2,740

2,750

2,760

2,770

2,780

2,790

2,800

AmpR promoter

AmpR

template sequence pAS1.8 (prqA-gRNA-1)

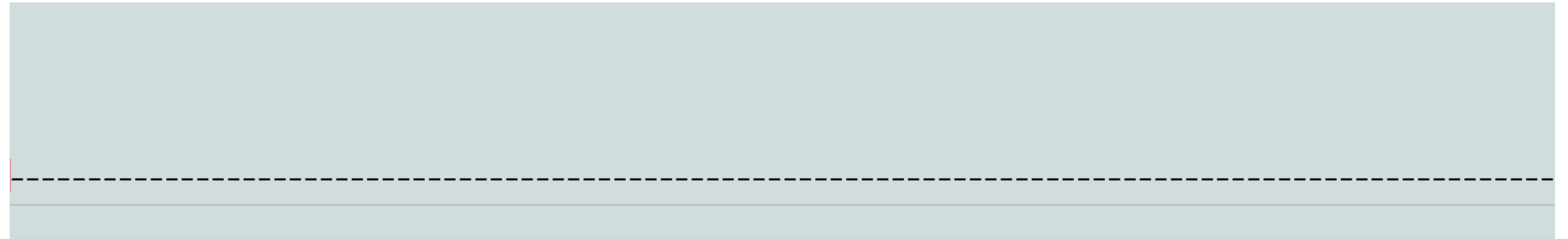
aligned sequence 2020-11-13_E02_ASAS18BSP4

atTTTgccttcctgtttttgctcaccagaaacgctggtgaaagtaaaagatgctgaagatcagttgggtgcacgagtggttacatcgaactggatctc

2,810 2,820 2,830 2,840 2,850 2,860 2,870 2,880 2,890 2,900

>> AmpR >>

template sequence pAS1.8 (prqA-gRNA-1)



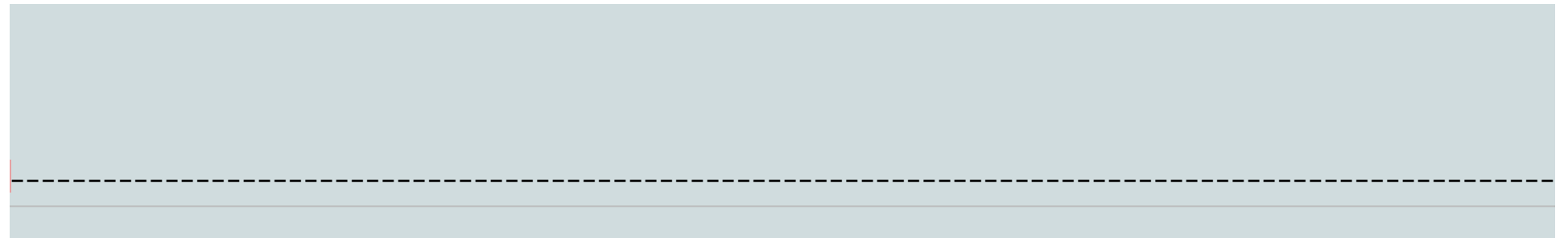
aligned sequence 2020-11-13_E02_ASAS18BSP4

aacagcggtaagatccttgagagttttcgccccgaagaacgttttccaatgatgagcacttttaaagtcttgctatgtggcgcggtattatcccgtattg

2,910 2,920 2,930 2,940 2,950 2,960 2,970 2,980 2,990 3,000

>> AmpR >>

template sequence pAS1.8 (prqA-gRNA-1)



aligned sequence 2020-11-13_E02_ASAS18BSP4

acgccgggcaagagcaactcggtcgccgcatactattctcagaatgacttggttgagtactcaccagtcacagaaaagcatcttacggatggcatgac

3,010

3,020

3,030

3,040

3,050

3,060

3,070

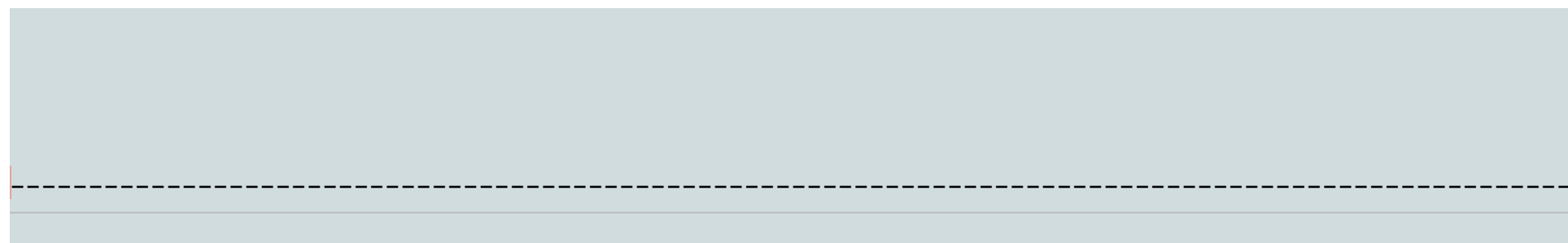
3,080

3,090

3,100

>> AmpR >>

template sequence pAS1.8 (prqA-gRNA-1)



aligned sequence 2020-11-13_E02_ASAS18BSP4

agtaagagaattatgcagtgctgccataaccatgagtgataaacactgcggccaacttacttctgacaacgatcggaggaccgaaggagctaaccgctttt

3,110

3,120

3,130

3,140

3,150

3,160

3,170

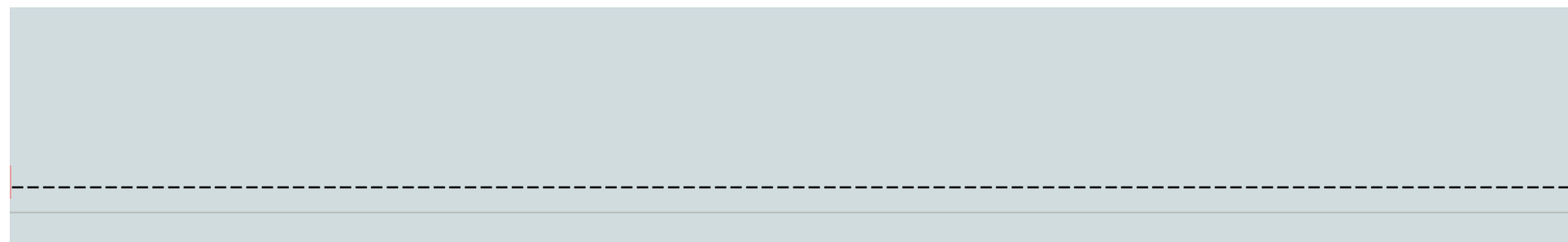
3,180

3,190

3,200

>> AmpR >>

template sequence pAS1.8 (prqA-gRNA-1)



aligned sequence 2020-11-13_E02_ASAS18BSP4

ttgcacaacatgggggatcatgtaactcgccttgatcgttggaaccggagctgaatgaagccataccaaacgacgagcgtgacaccacgatgcctgtag

3,210

3,220

3,230

3,240

3,250

3,260

3,270

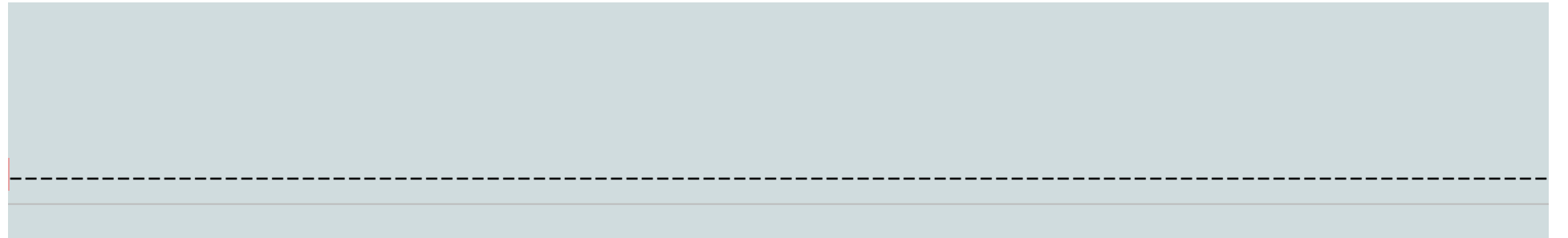
3,280

3,290

3,300

>> AmpR >>

template sequence pAS1.8 (prqA-gRNA-1)



aligned sequence 2020-11-13_E02_ASAS18BSP4

caatggcaacaacgttgcgcaaactattaactggcgaactacttactctagcttcccggcaacaattaatagactggatggaggcggataaagttgcagg

3,310

3,320

3,330

3,340

3,350

3,360

3,370

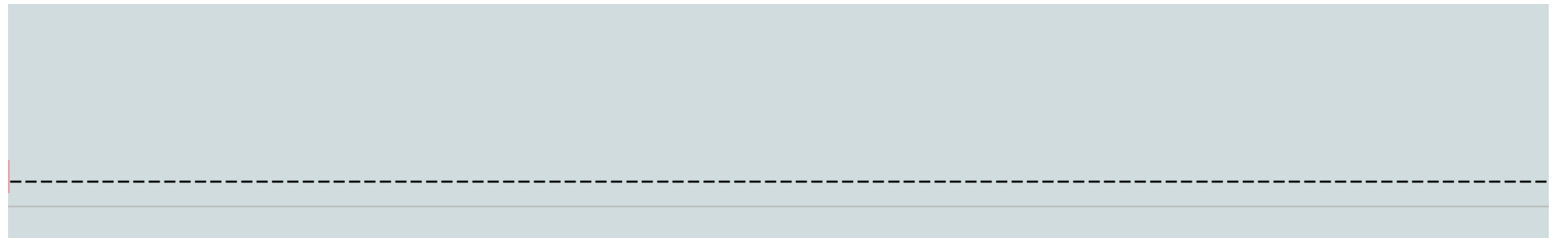
3,380

3,390

3,400

>> AmpR >>

template sequence pAS1.8 (prqA-gRNA-1)



aligned sequence 2020-11-13_E02_ASAS18BSP4

accacttctgcgctcggcccttccggctggctgggtttattgctgataaatctggagccggtgagcgtgggttctcgcggtatcattgcagcactggggcca

3,410

3,420

3,430

3,440

3,450

3,460

3,470

3,480

3,490

3,500

>> AmpR >>

template sequence pAS1.8 (prqA-gRNA-1)



aligned sequence 2020-11-13_E02_ASAS18BSP4

gatggtaagccctcccgtagttagttatctacacgacgaggagtcaggcaactatggatgaacgaaatagacagatcgctgagataggtgcctcactga

3,510

3,520

3,530

3,540

3,550

3,560

3,570

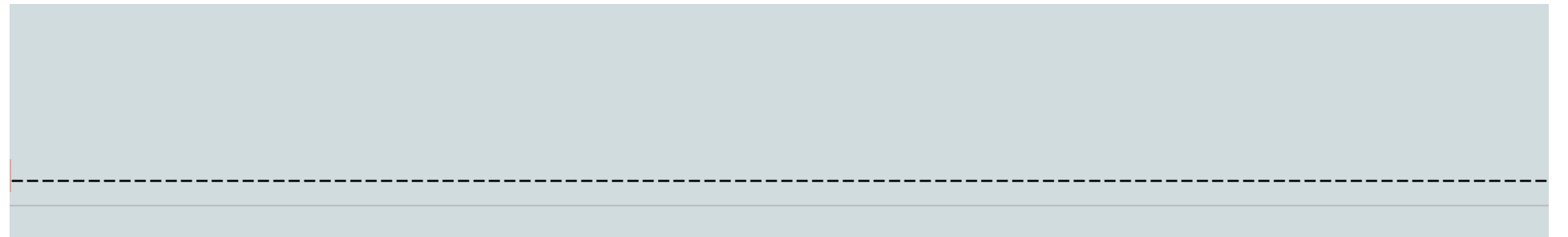
3,580

3,590

3,600

>> AmpR >>

template sequence pAS1.8 (prqA-gRNA-1)



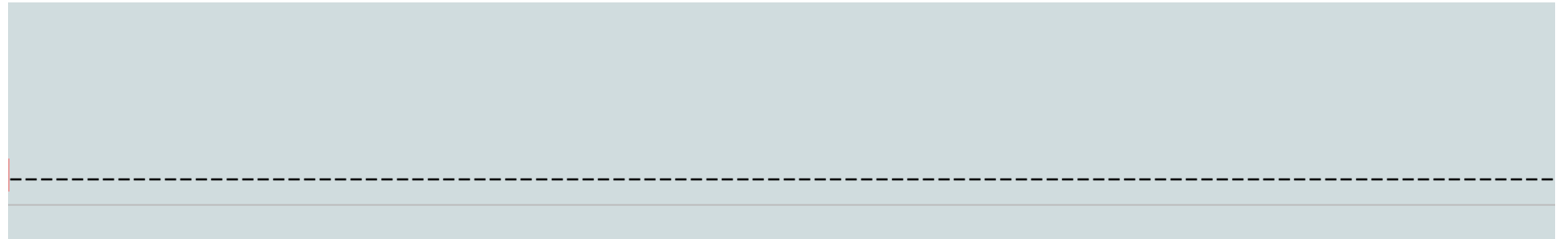
aligned sequence 2020-11-13_E02_ASAS18BSP4

ttaagcattggtaactgtcagaccaagtttactcatatatacttttagattgatttaaacttcattttttaatttaaaggatctaggtgaagatcctttt

3,610 3,620 3,630 3,640 3,650 3,660 3,670 3,680 3,690 3,700

>> AmpR

template sequence pAS1.8 (prqA-gRNA-1)



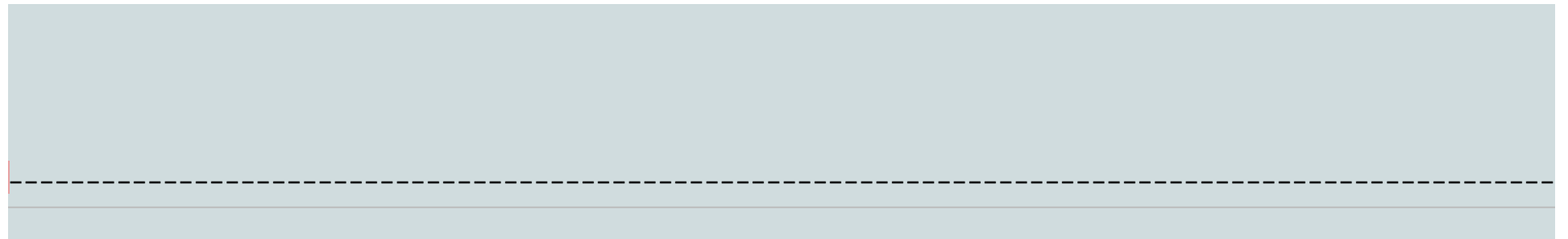
aligned sequence 2020-11-13_E02_ASAS18BSP4

tgataatctcatgaccaaatacccttaacgtgagttttcgttccactgagcgtcagaccccgtagaaaagatcaaaggatcttcttgagatcctttttt

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

ori >>

template sequence pAS1.8 (prqA-gRNA-1)



aligned sequence 2020-11-13_E02_ASAS18BSP4

ctgcgcgtaatctgctgcttgcaacaaaaaaaccaccgctaccagcgggtggtttgccggatcaagagctaccaactcttttccgaaggttaactg

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

>> ori >>

template sequence pAS1.8 (prqA-gRNA-1)



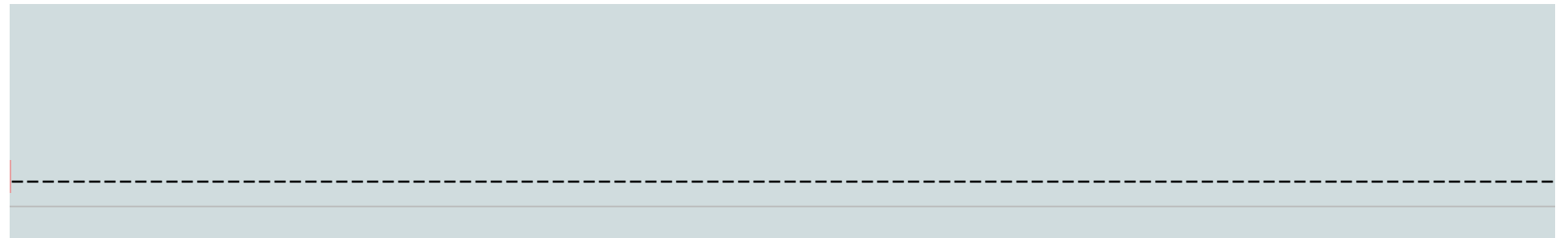
aligned sequence 2020-11-13_E02_ASAS18BSP4

gcttcagcagagcgcagataccaaatactgtccttctagtgtagccgtagttaggccaccacttcaagaactctgtagcaccgcctacatacctcgctctt

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

>> ori >>

template sequence pAS1.8 (prqA-gRNA-1)



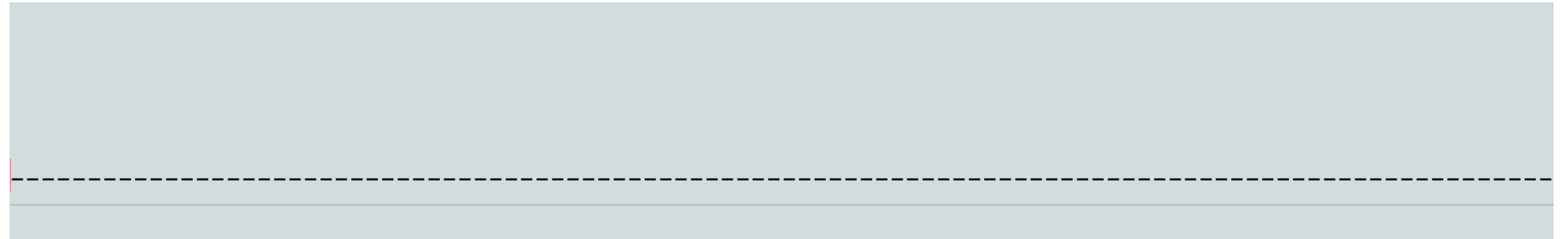
aligned sequence 2020-11-13_E02_ASAS18BSP4

gctaatcctgttaccagtggctgctgccagtggcgataagtcgtgtccttaccgggttggactcaagacgatagttaccggataaggcgcagcggtcgggc

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

>> ori >>

template sequence pAS1.8 (prqA-gRNA-1)

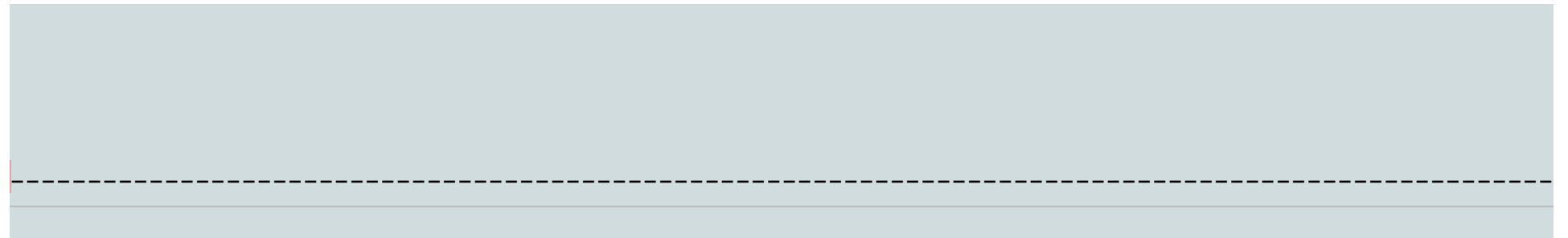


tgaacgggggggttcgtgcacacagcccagcttggagcgaacgacctacaccgaactgagatacctacagcgtgagctatgagaaagcgccacgcttccc

4,110 4,120 4,130 4,140 4,150 4,160 4,170 4,180 4,190 4,200

>> ori >>

template sequence pAS1.8 (prqA-gRNA-1)



aagggagaaaggcggacaggtatccggttaagcggcagggtcggaacaggagagcgcacgagggagcttccaggggaaacgcctggtatctttatagtcc

4,210

4,220

4,230

4,240

4,250

4,260

4,270

4,280

4,290

4,300

ori

pBR322ori-F

template sequence pAS1.8 (prqA-gRNA-1)

aligned sequence 2020-11-13_E02_ASAS18BSP4

tgtcgggtttcgccacctctgacttgagcgtcgatTTTTGTGATGCTCGTCAGGGGGCGGAGCCTATGGAAAAAGCCAGCAACGCGGCCTTTTACGG

4,310

4,320

4,330

4,340

4,350

4,360

4,370

4,380

4,390

4,400

ori

template sequence pAS1.8 (prqA-gRNA-1)

aligned sequence 2020-11-13_E02_ASAS18BSP4

ttcctggcagatcctagatgtggcgcaacgatgccggcgacaagcaggagcgcaccgacttcttccgcatcaagtgttttggctctcaggccgaggccca

4,410 4,420 4,430 4,440 4,450 4,460 4,470 4,480 4,490 4,500
template sequence pAS1.8 (prqA-gRNA-1)



aligned sequence 2020-11-13_E02_ASAS18BSP4

cggca
4,505

template sequence pAS1.8 (prqA-gRNA-1)



aligned sequence 2020-11-13_E02_ASAS18BSP4