

## Template Alignment: 2020-11-13\_E02\_ASAS18BSP4

agtatattgggcaaggggtcgctggtattcgtgcagggcaagattcggaataccaagtacgagaaggacggccagacggtctacgggaccgacttcattgc

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

aligned sequence 2020-11-13\_E02\_ASAS18BSP4

cgataagggtggattatctggacaccaaggcaccaggcgggtcaaatacaggaataagggcacattgccccggcggtgagtcggggcaatcccgaaggaggg

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

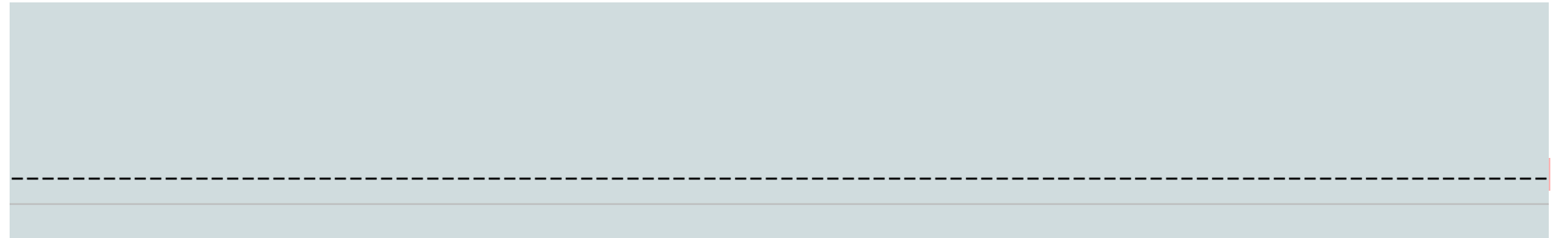
480

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

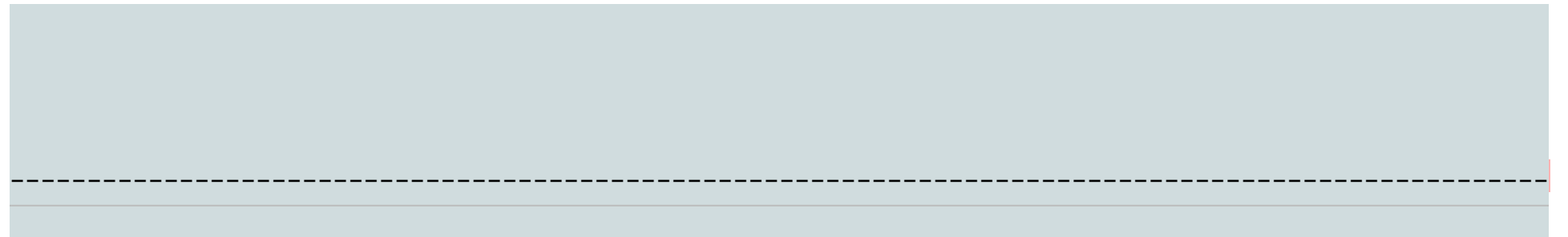
580

590

600

» trfA »

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



aligned sequence 2020-11-13\_E02\_ASAS18BSP4

tgacgctttccttggttcgatattgcgccgtggccggacacgatgacgagcgatgccaaacgacacggcccgcctctgccctgttcaccacgcgcaacaagaa

610

620

630

640

650

660

670

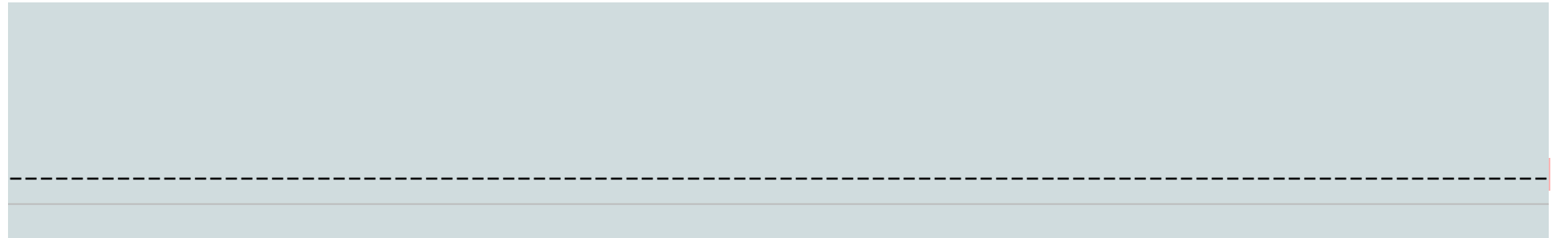
680

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

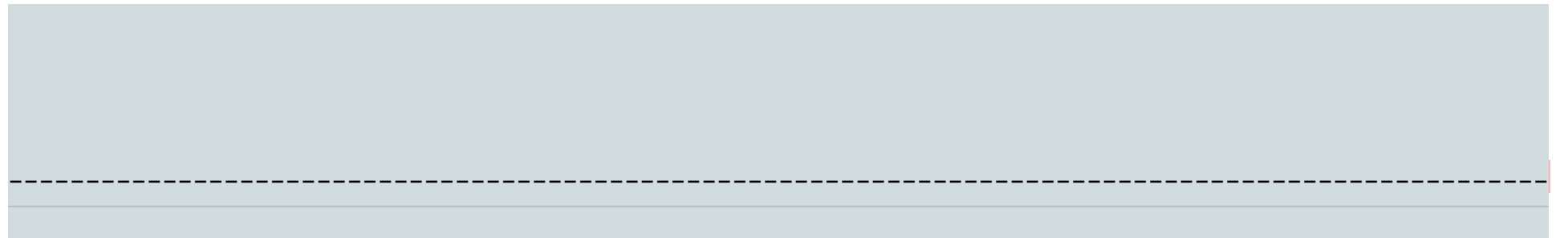
780

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

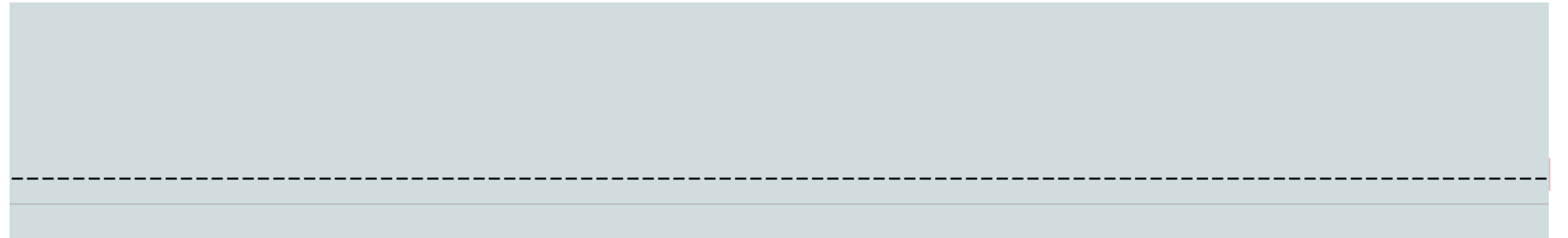
880

890

900

>> trfA >>

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



aligned sequence 2020-11-13\_E02\_ASAS18BSP4

tcaatggccggtattacacgaaggccgaggaatgcctgtcgcgcctacaggcgacggcgatgggcttcacgtccgaccgcgttgggcacctggaatcggt

910

920

930

940

950

960

970

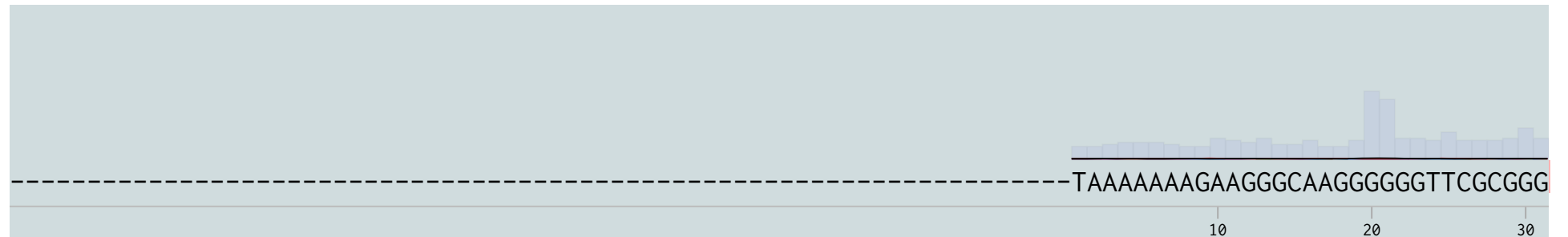
980

990

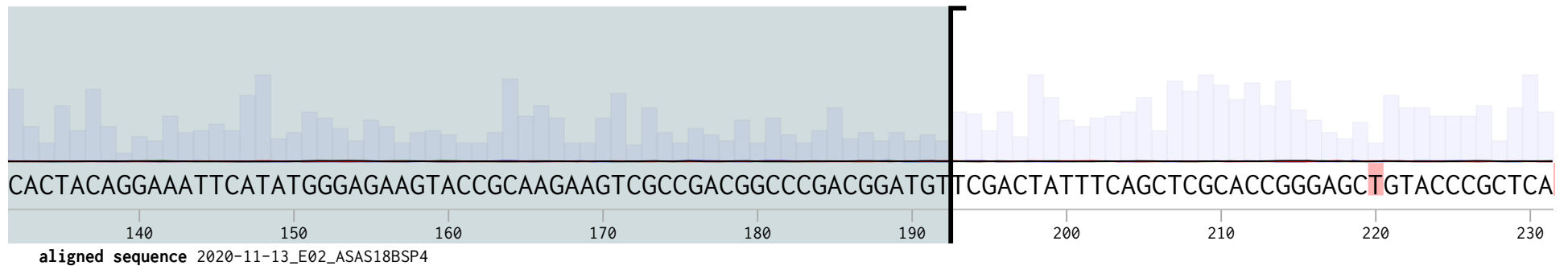
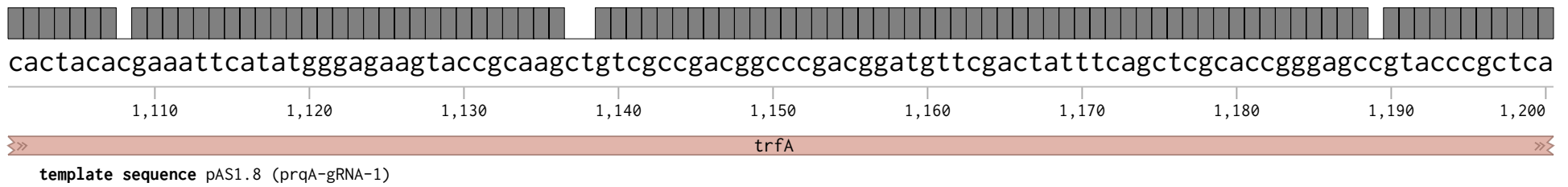
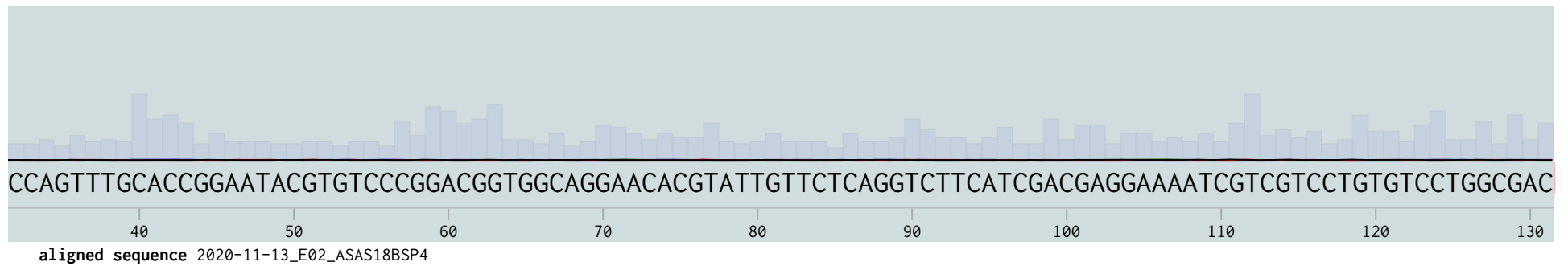
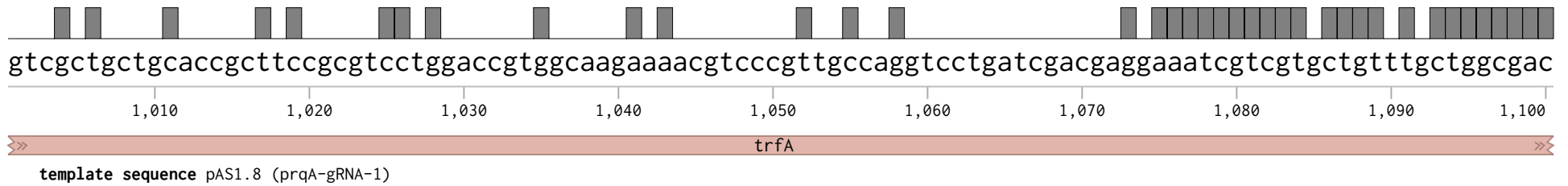
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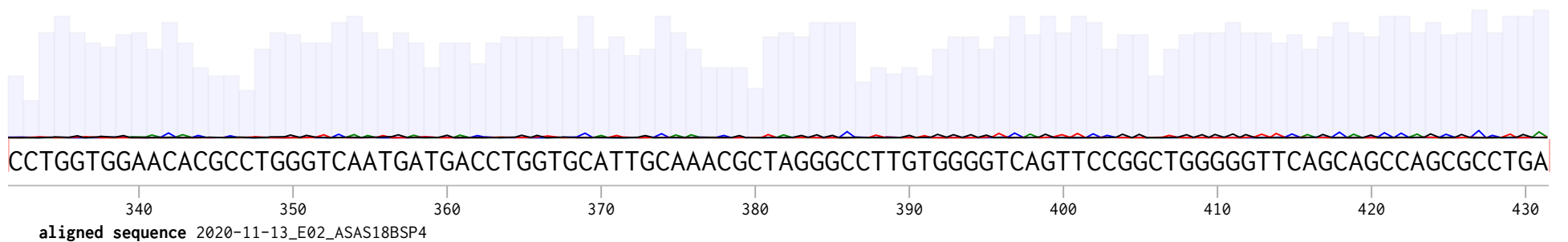
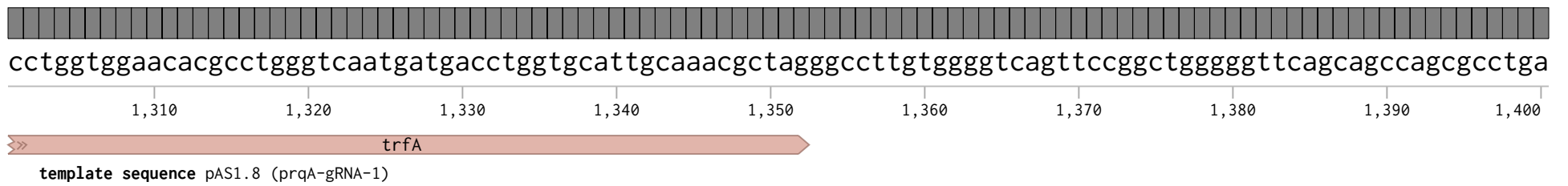
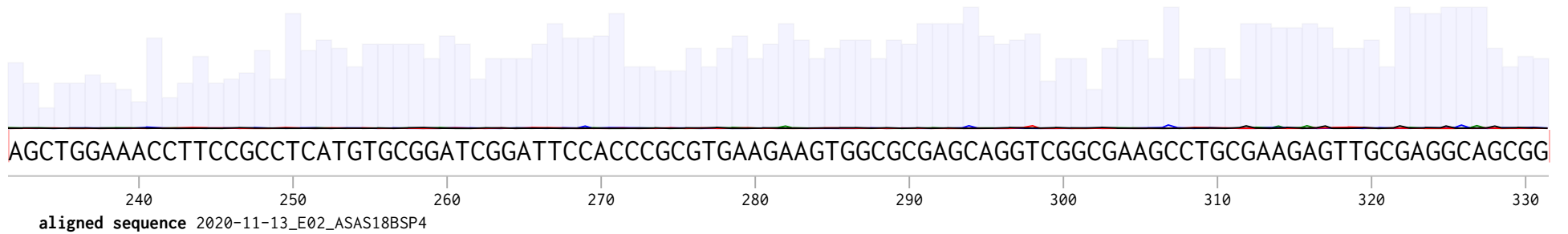
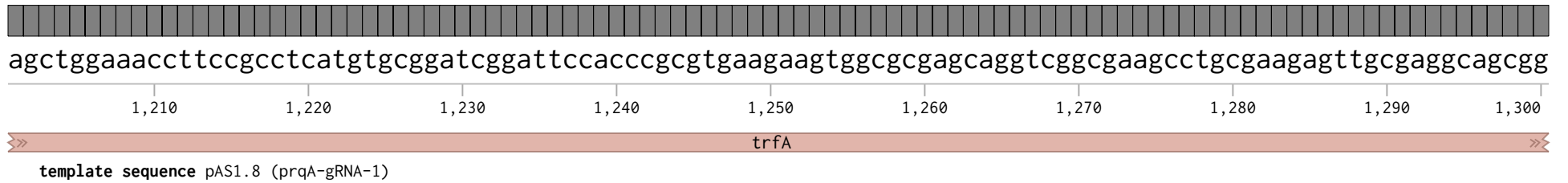
>> trfA >>

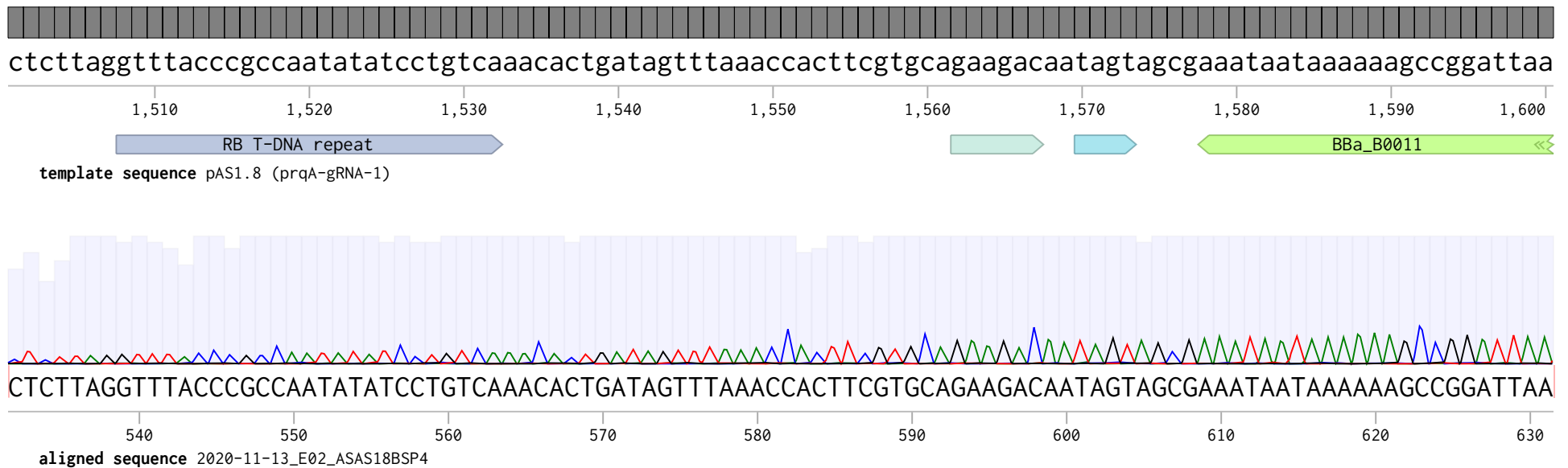
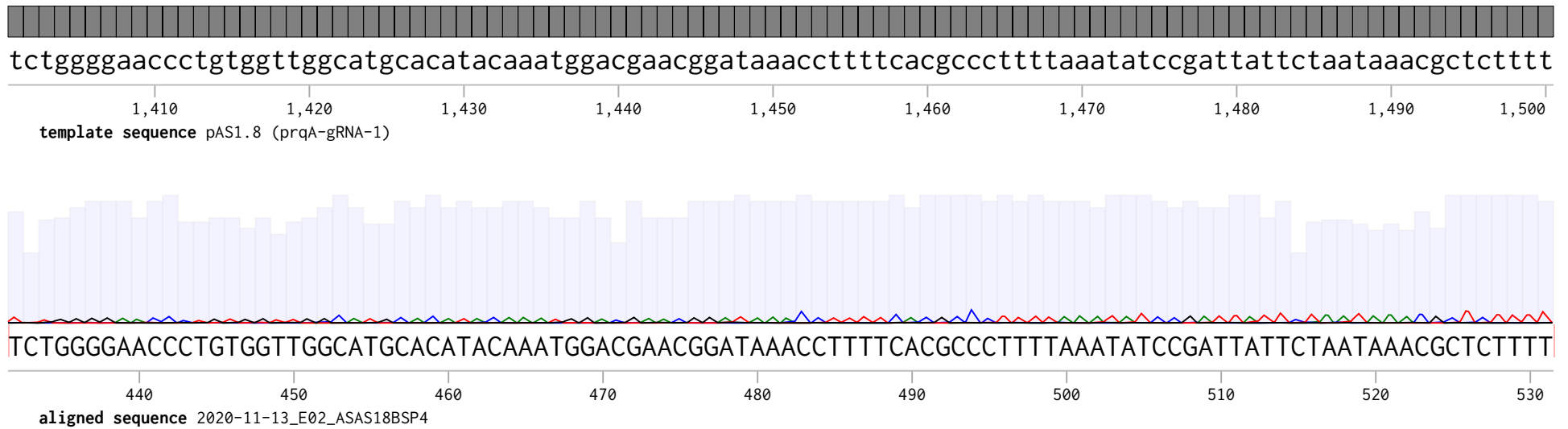
template sequence pAS1.8 (prqA-gRNA-1)



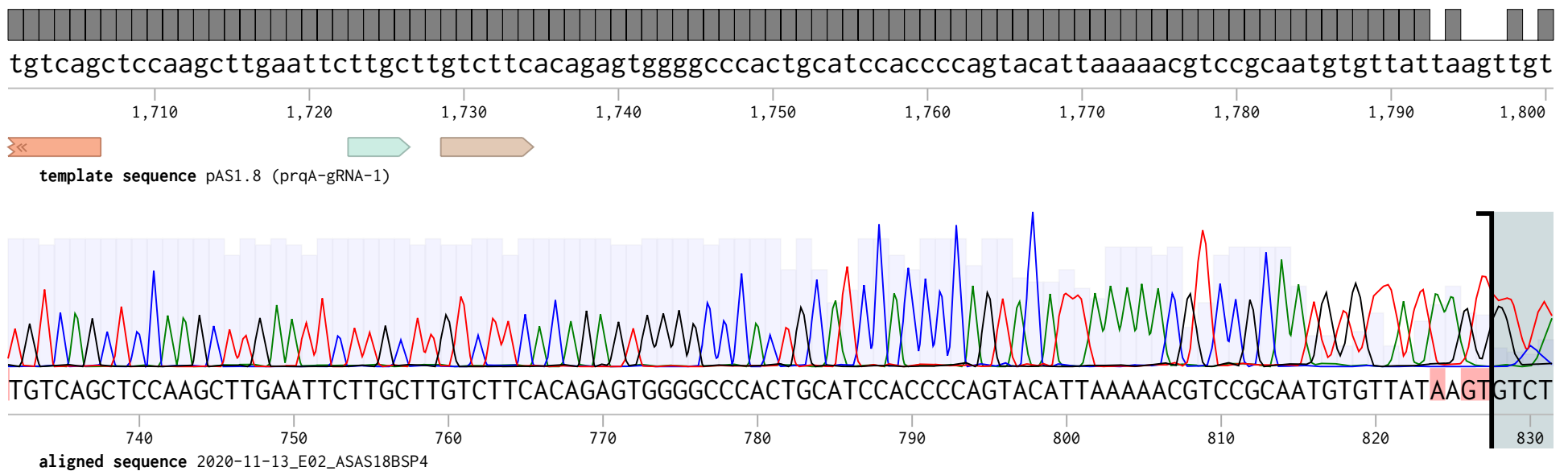
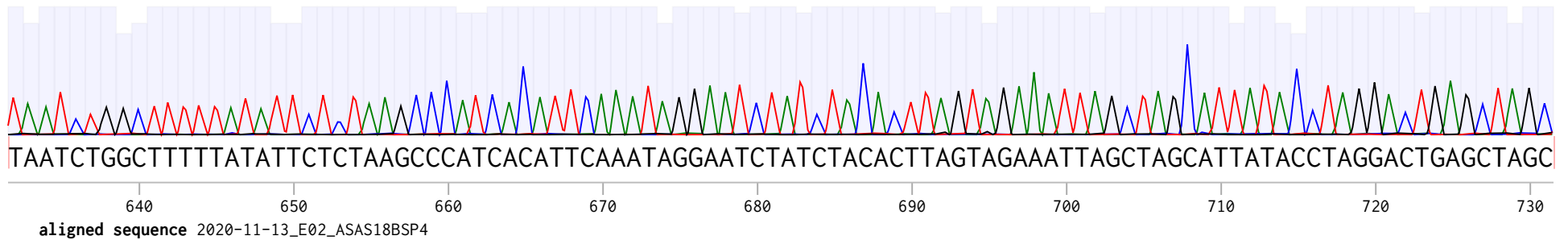
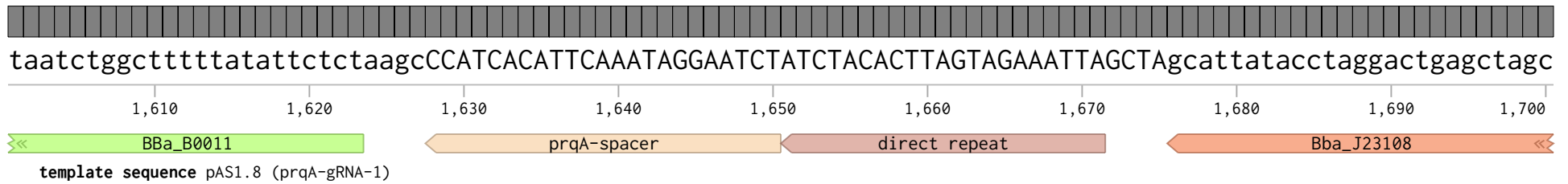
aligned sequence 2020-11-13\_E02\_ASAS18BSP4

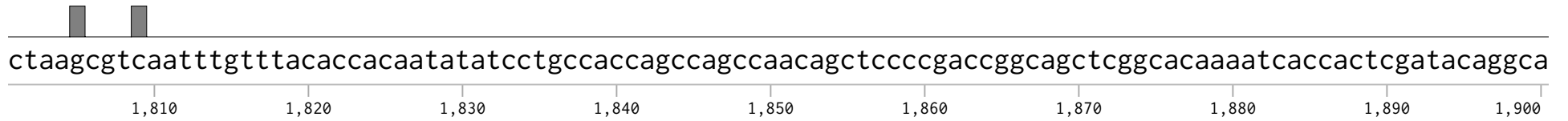












acgccgtcgaagccgtgtgcgagacaccgcggccgcccggcgttgtggatacctcgcggaacttggccctcactgacagatgaggggcggacgttgaca

2,010

2,020

2,030

2,040

2,050

2,060

2,070

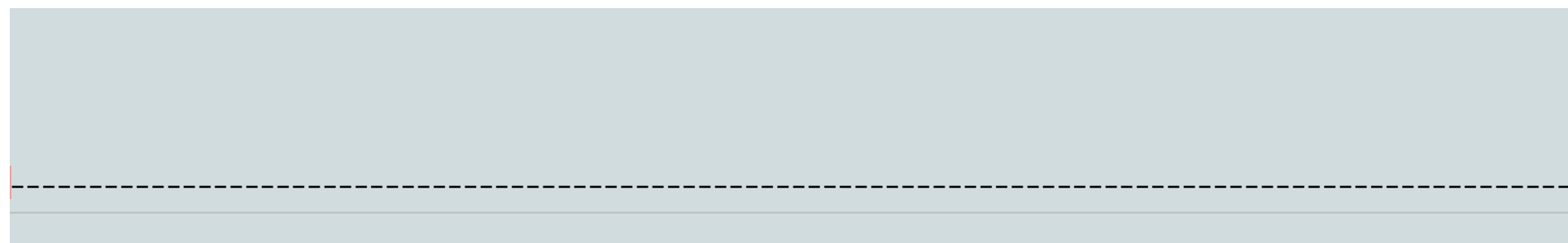
2,080

2,090

2,100

>> oriV >>

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



aligned sequence 2020-11-13\_E02\_ASAS18BSP4

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)



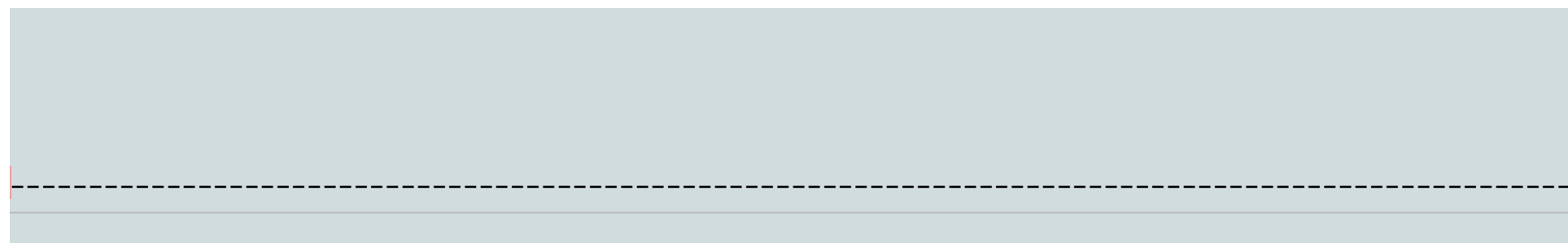
aligned sequence 2020-11-13\_E02\_ASAS18BSP4

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)



aligned sequence 2020-11-13\_E02\_ASAS18BSP4

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)



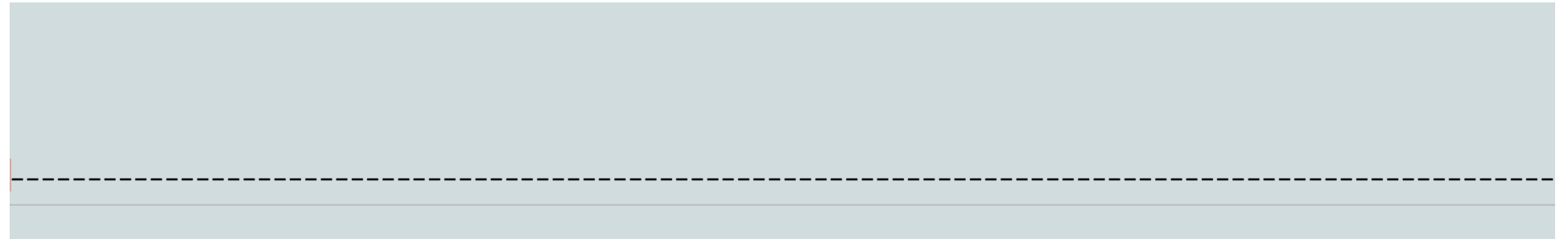
aligned sequence 2020-11-13\_E02\_ASAS18BSP4

gcaaggggtttccgcccgtttttcgggccaccgctaacctgtcttttaacctgcttttaaccaatatattataaaccttgtttttaaccagggtgcgcctt

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)



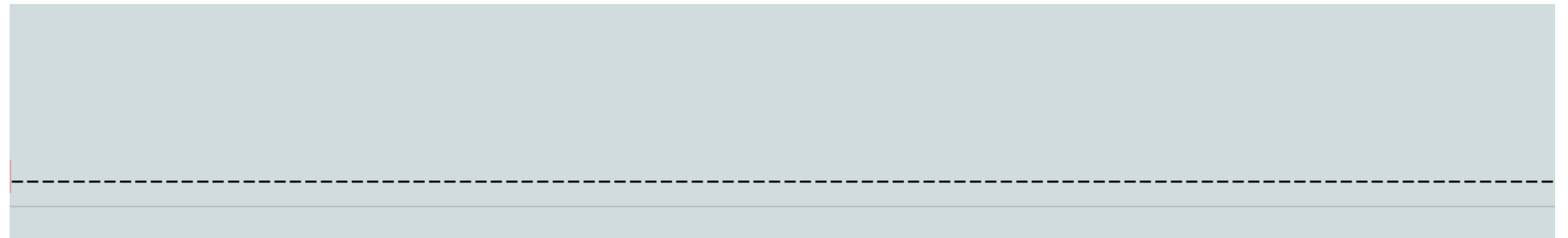
aligned sequence 2020-11-13\_E02\_ASAS18BSP4

gtgcgcgtgaccgcgcacgccgaaggggggtgcccccttctcgaaccctcccgggccgctaacgcgggcctcccatccccccagggtgcgcgcctt

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)



aligned sequence 2020-11-13\_E02\_ASAS18BSP4

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)

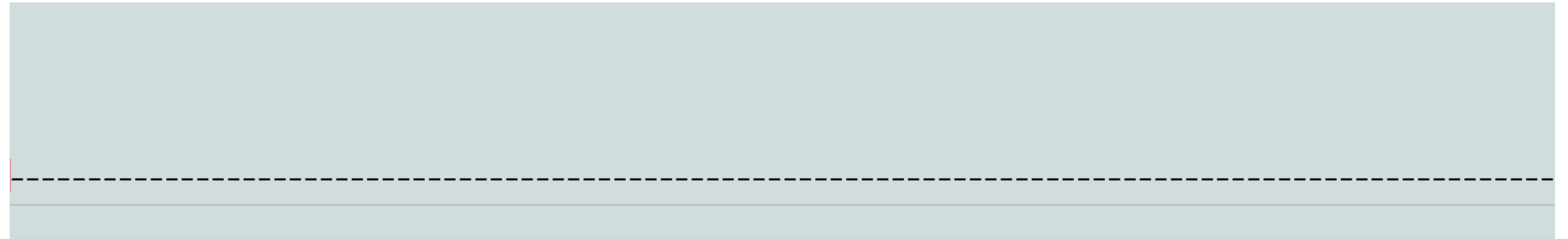
aligned sequence 2020-11-13\_E02\_ASAS18BSP4

atTTTgccttcctgtttttgctcaccagaaacgctggtgaaagtaaaagatgctgaagatcagttgggtgcacgagtgagggttacatcgaactggatctc

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)



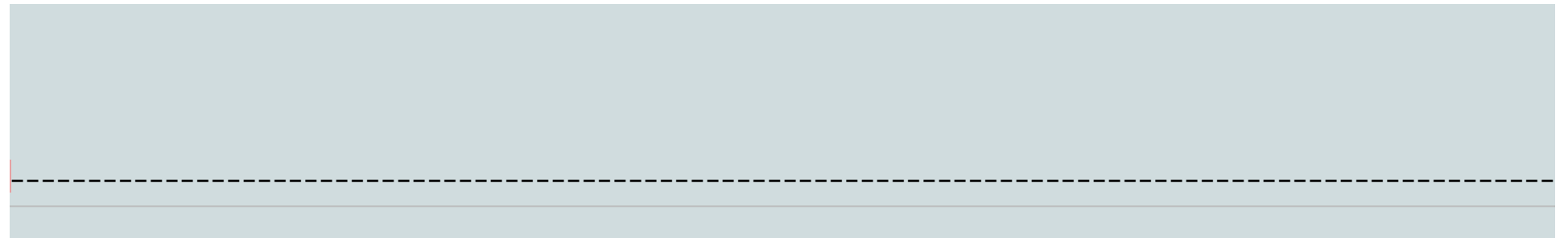
aligned sequence 2020-11-13\_E02\_ASAS18BSP4

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

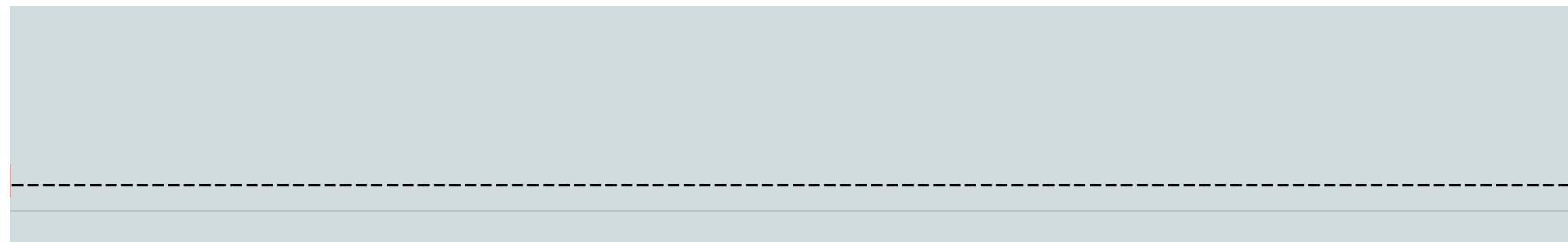
3,080

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

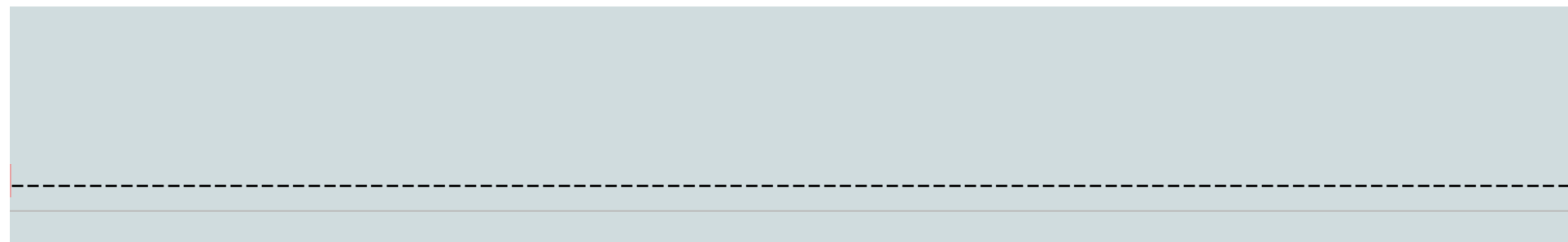
3,180

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

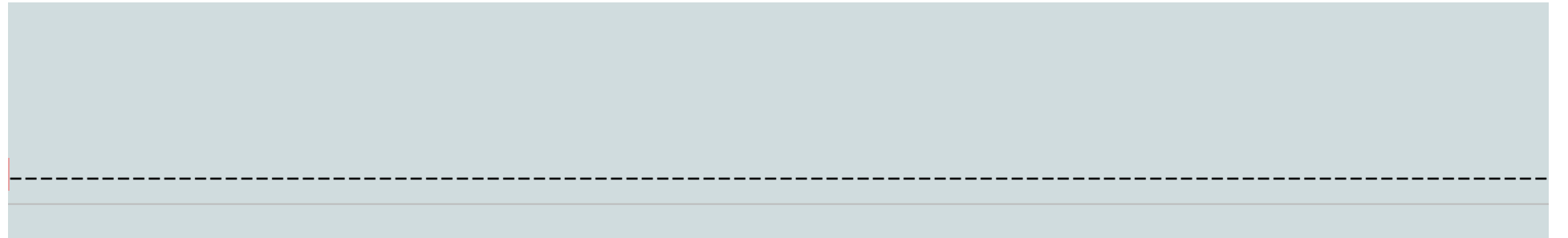
3,280

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

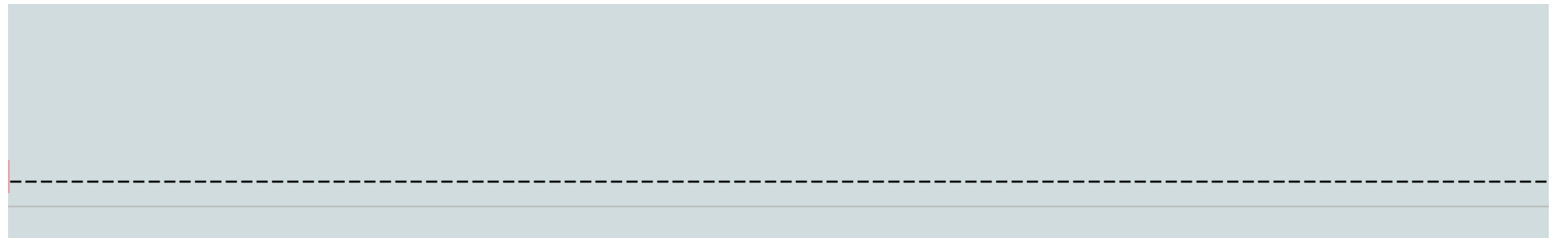
3,380

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

gatggtaagccctcccgtagttagttatctacacgacggggagtcaggcaactatggatgaacgaaatagacagatcgctgagataggtgcctcactga

3,510

3,520

3,530

3,540

3,550

3,560

3,570

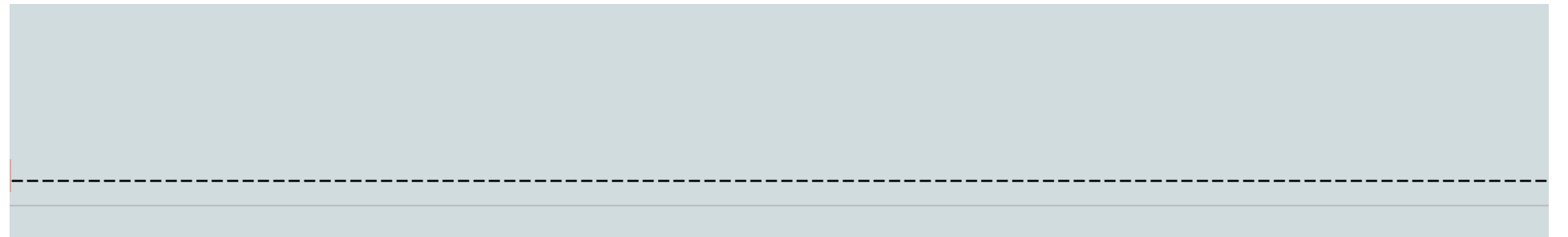
3,580

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

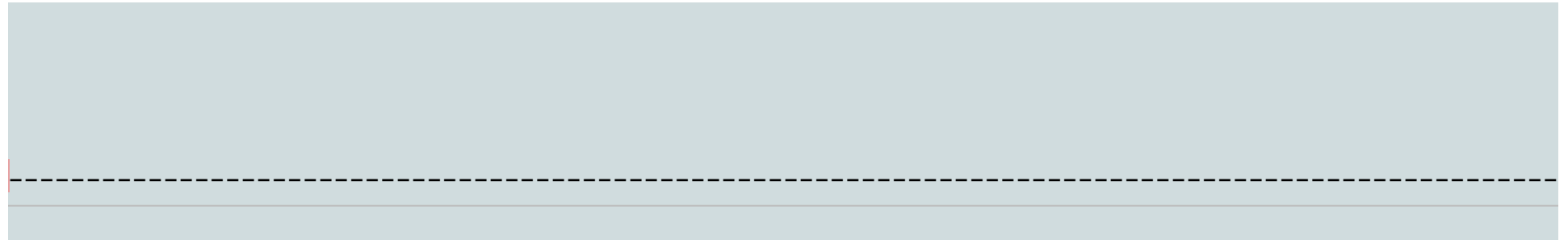
3,680

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

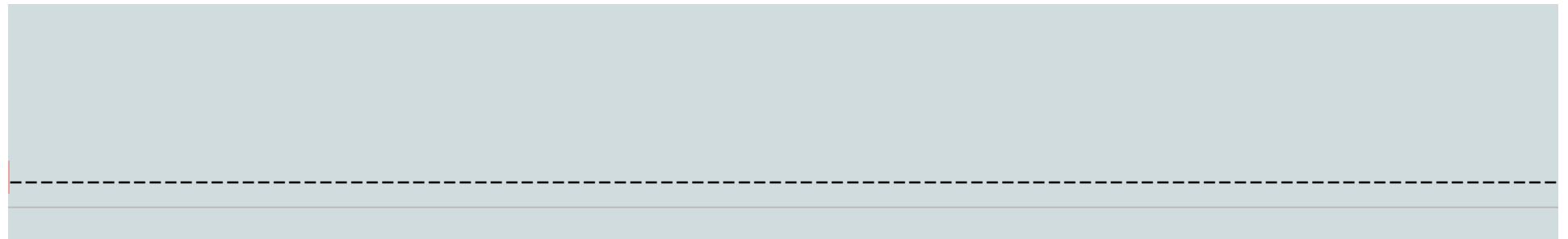
3,780

3,790

3,800

ori >>

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



aligned sequence 2020-11-13\_E02\_ASAS18BSP4

ctgcgcgtaatctgctgcttgcaacaaaaaaaccaccgctaccagcgggtggtttgtttgccggatcaagagctaccaactctttttccgaaggttaactg

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)



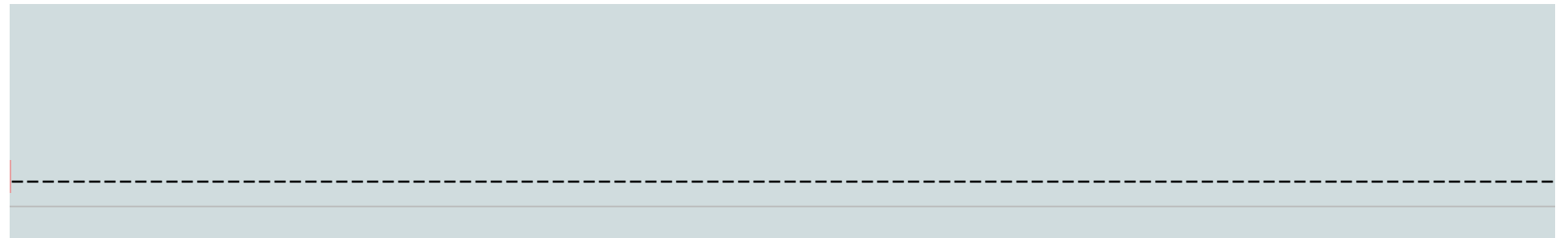
aligned sequence 2020-11-13\_E02\_ASAS18BSP4

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)



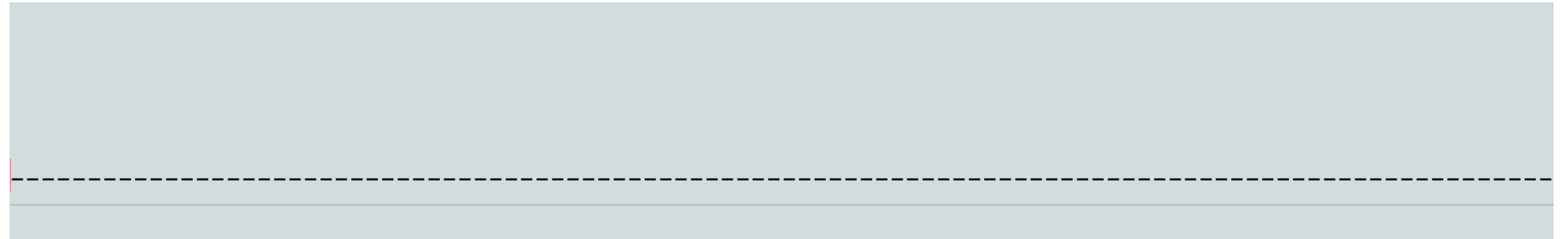
aligned sequence 2020-11-13\_E02\_ASAS18BSP4

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)

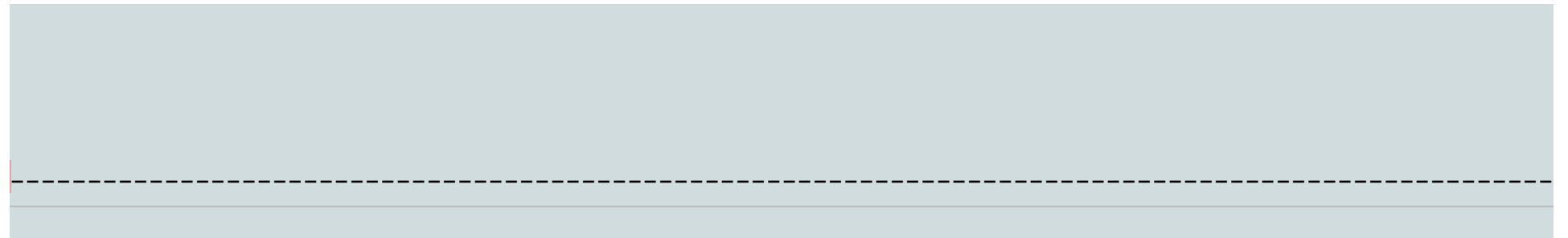


tgaacggggggttcgtgcacacagcccagcttggagcgaacgacctacaccgaactgagatacctacagcgtgagctatgagaaagcgccacgcttccc

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)



aagggagaaaggcggacaggtatccggttaagcggcagggtcggaacaggagagcgcacgaggagcttccaggggaaacgcctggtatctttatagtcc

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

tgtcgggtttcgccacctctgacttgagcgtcgatTTTTgtgatgctcgtcagggggcgaggagcctatggaaaaacgccagcaacgcggcctttttacgg

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