

Figure 1

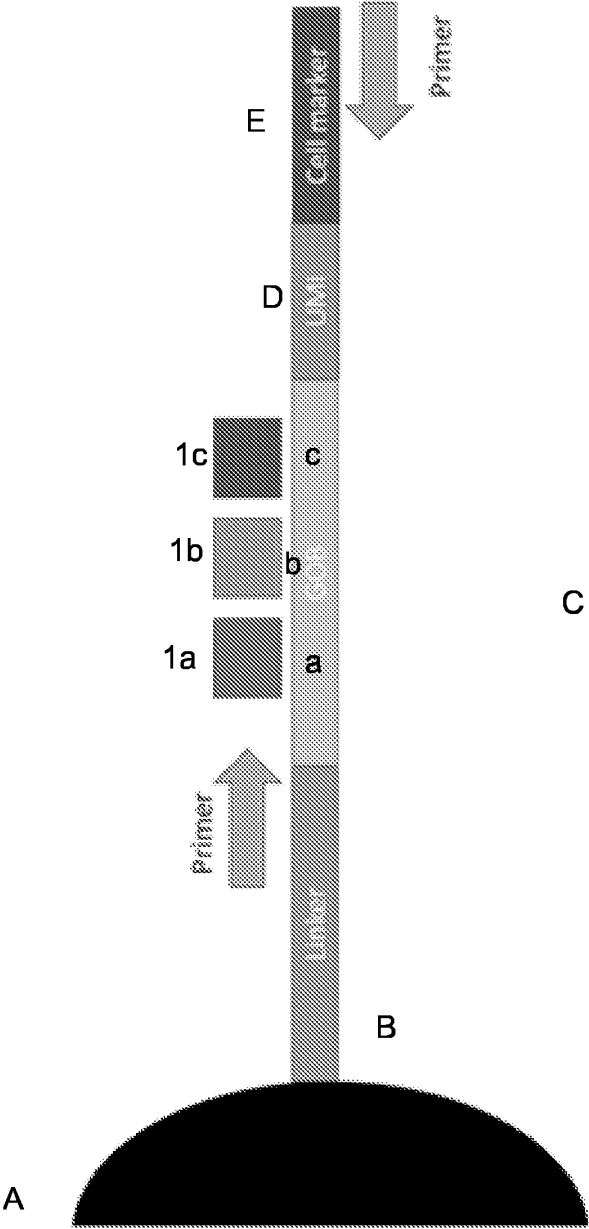
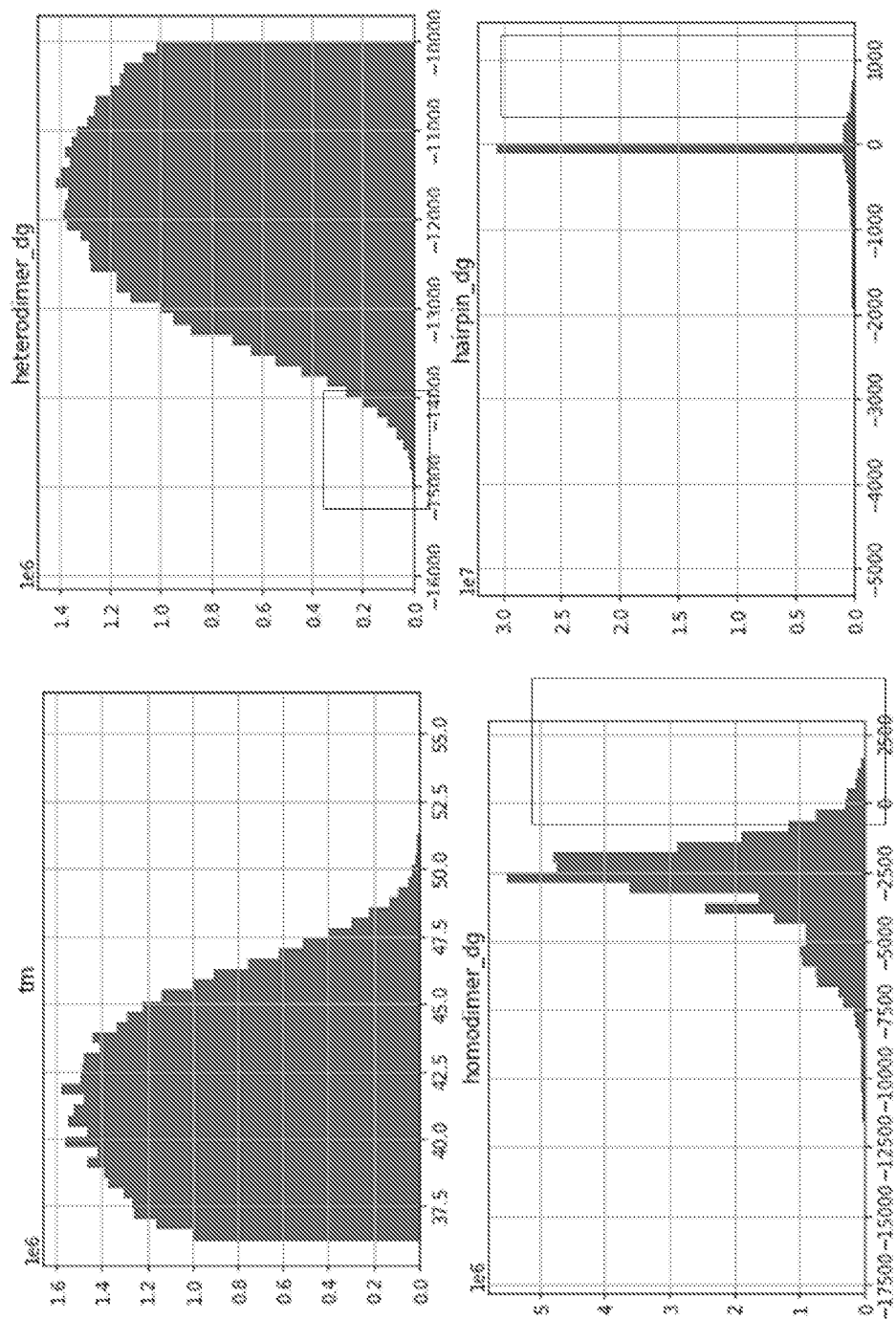


Figure 2



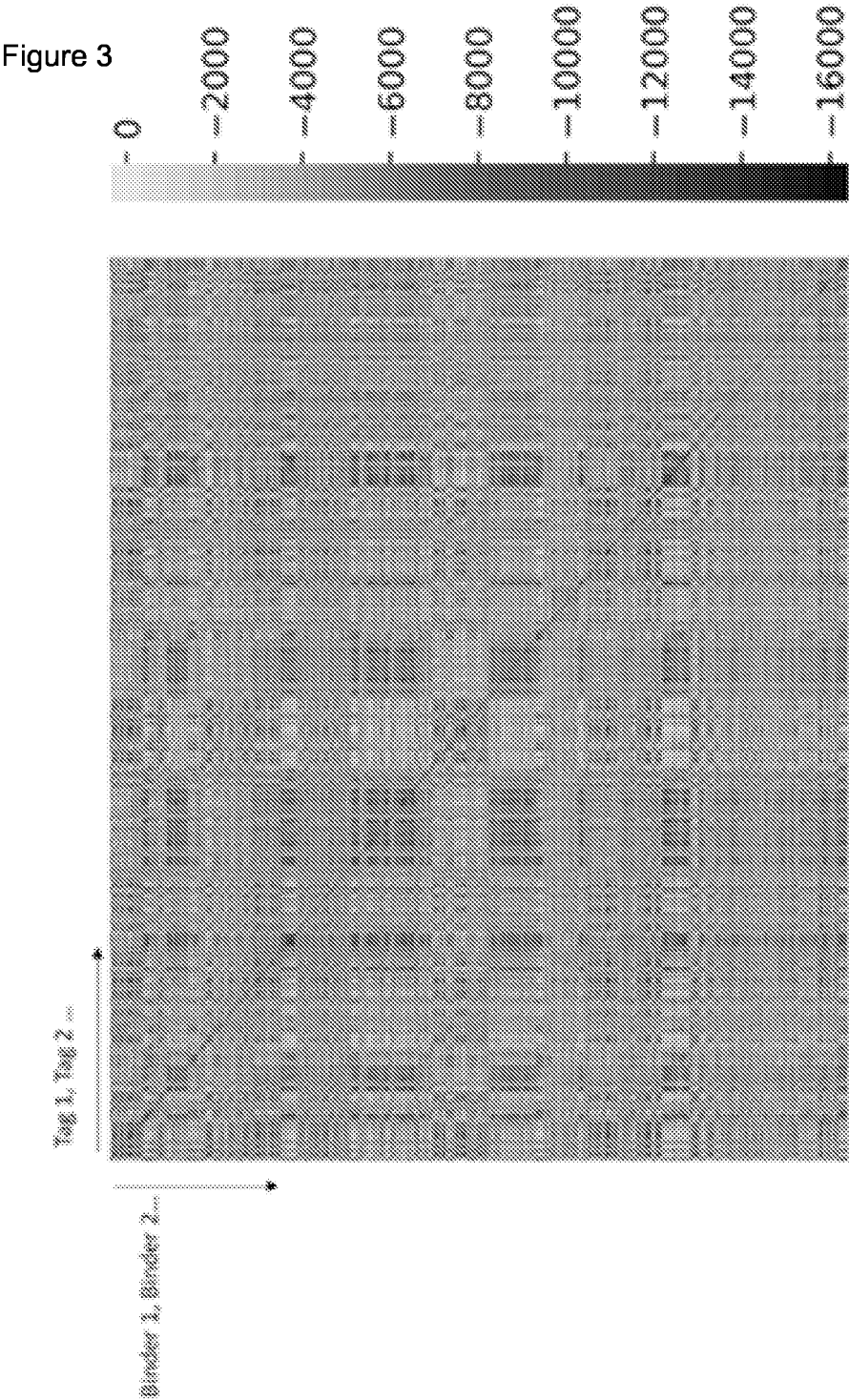


Figure 4

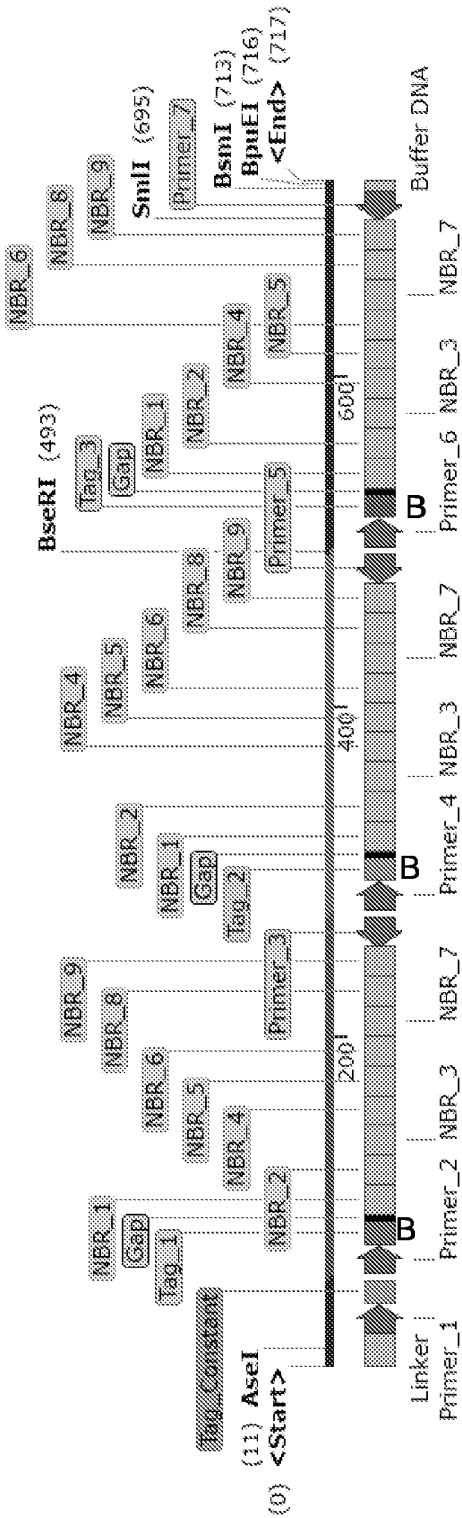


Figure 5

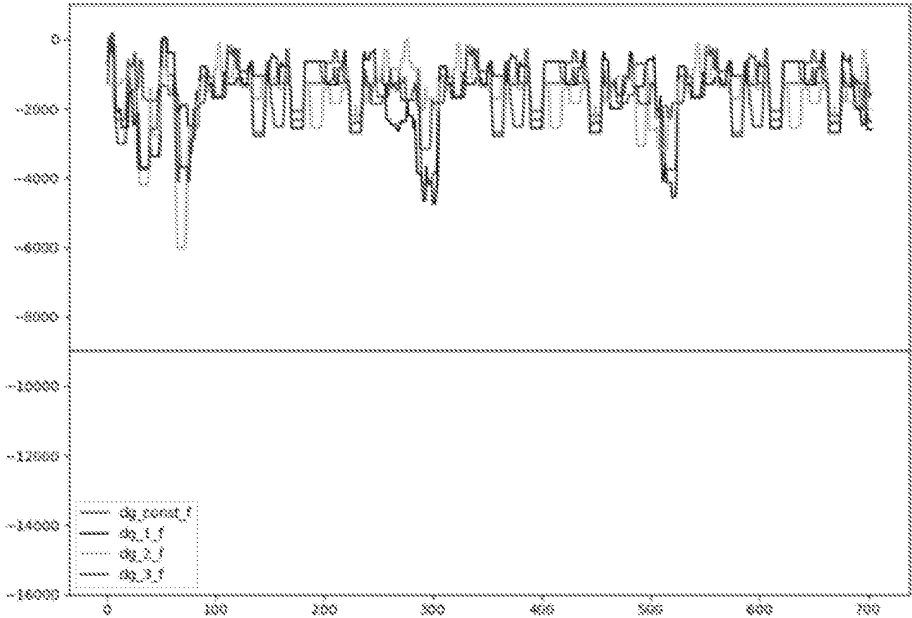
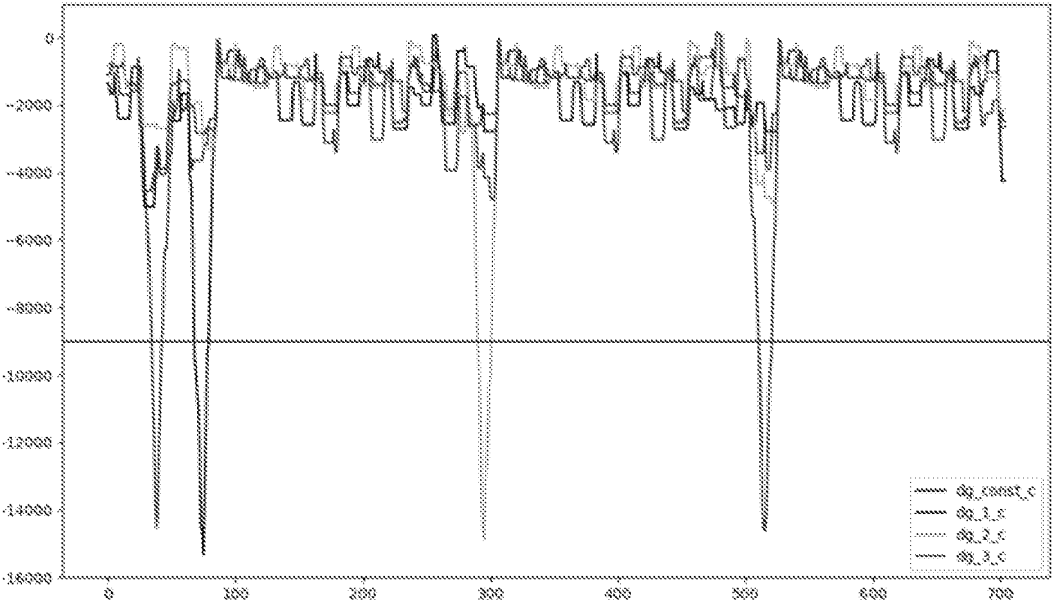


Figure 6

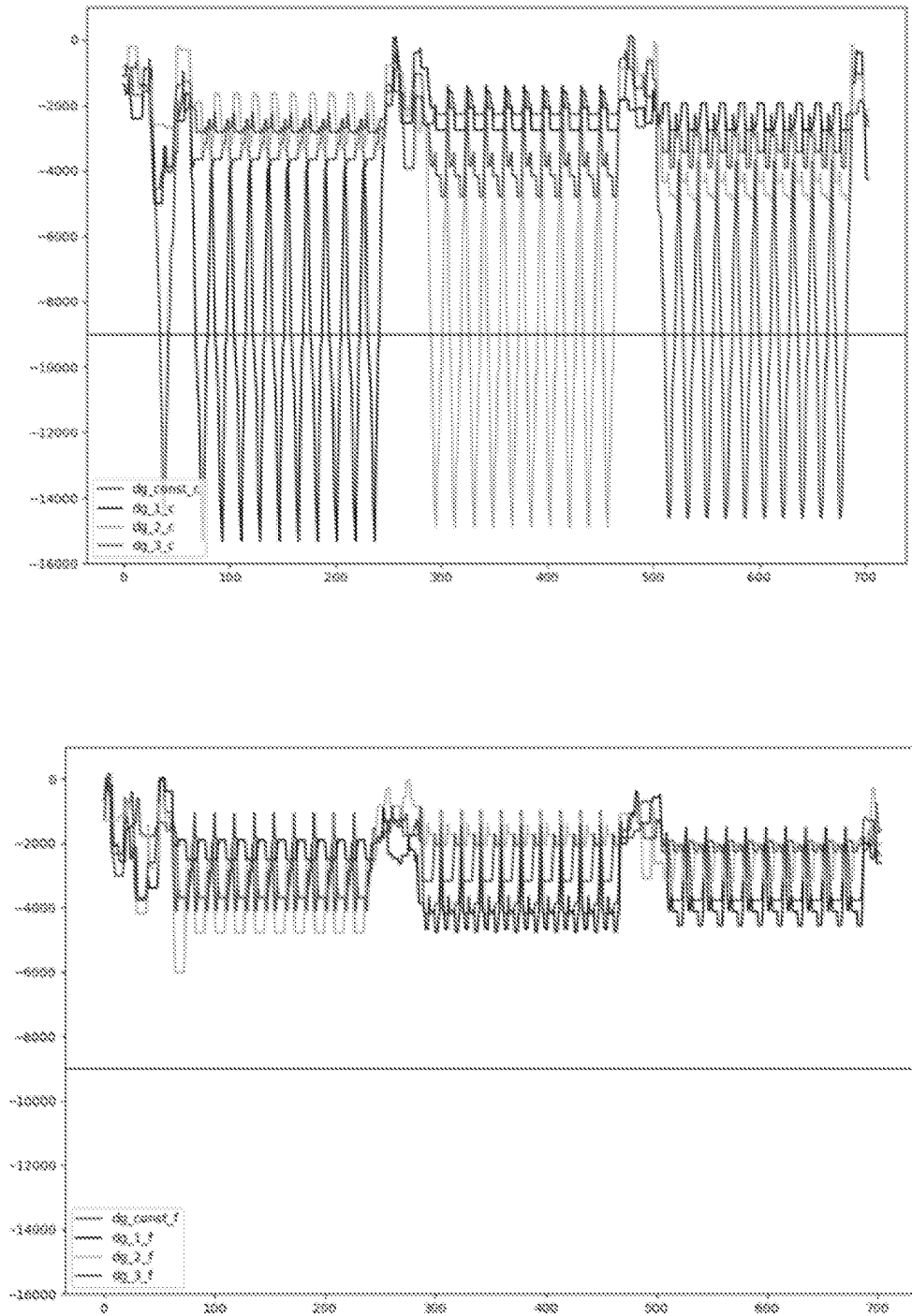


Figure 7

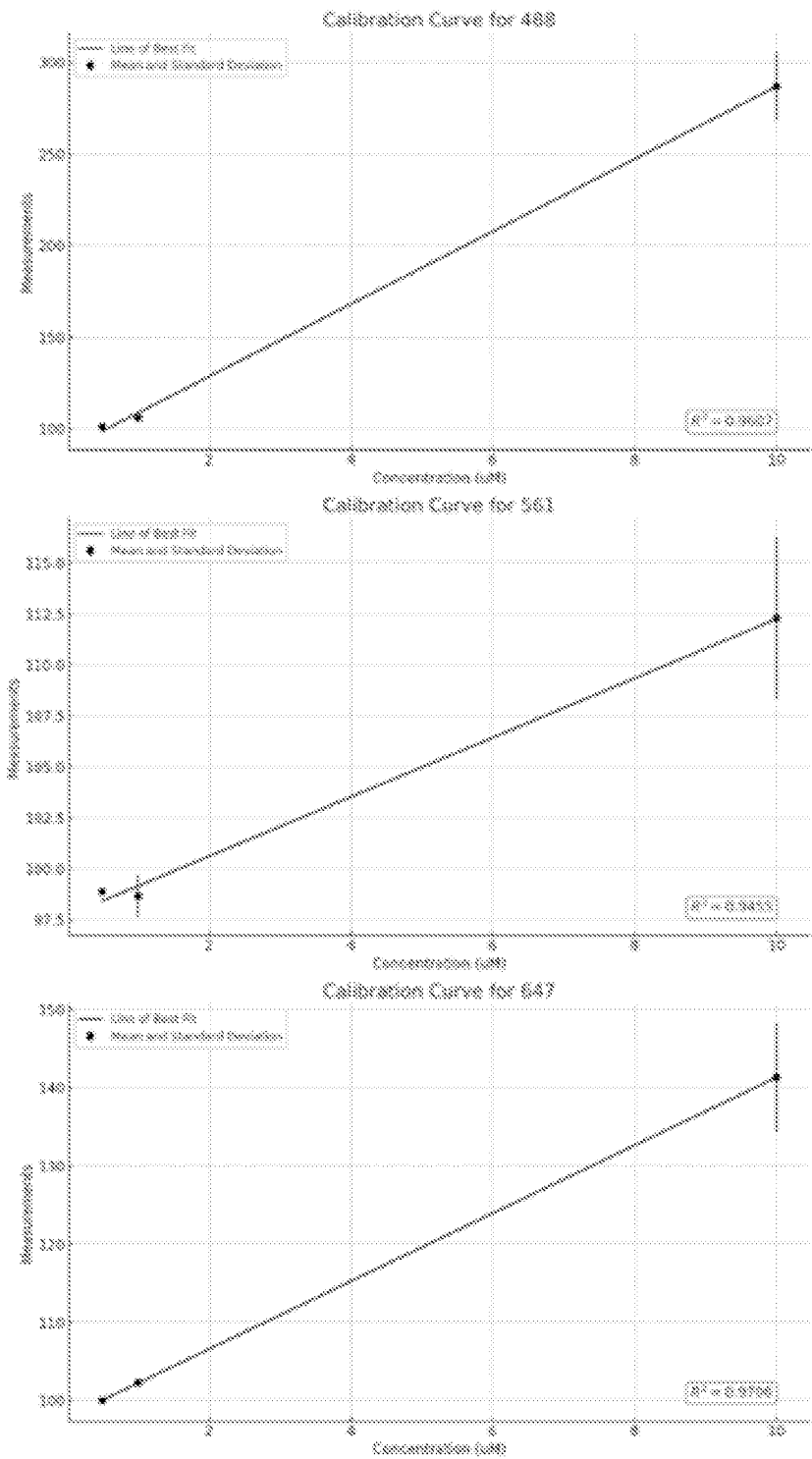


Figure 8

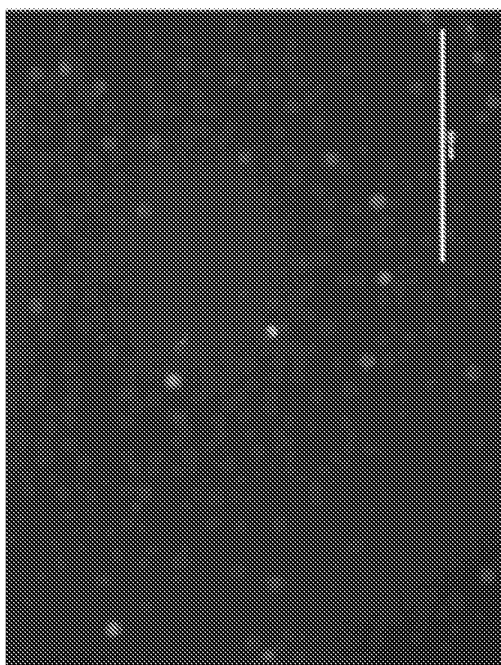
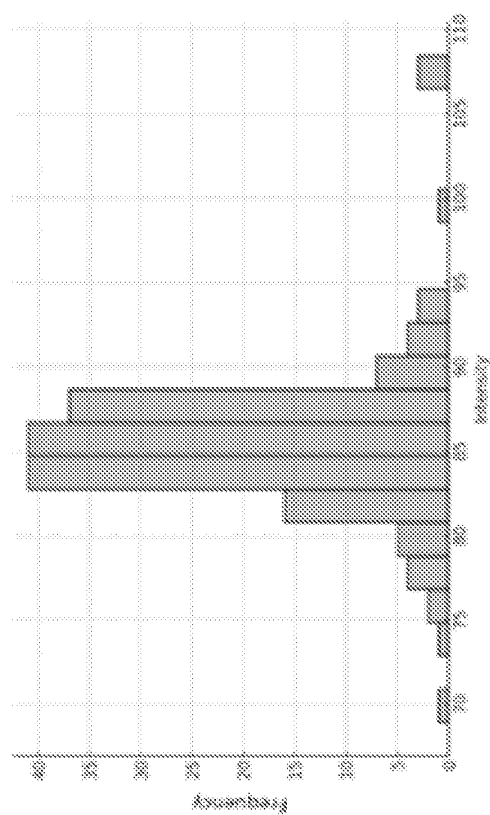


Figure 9

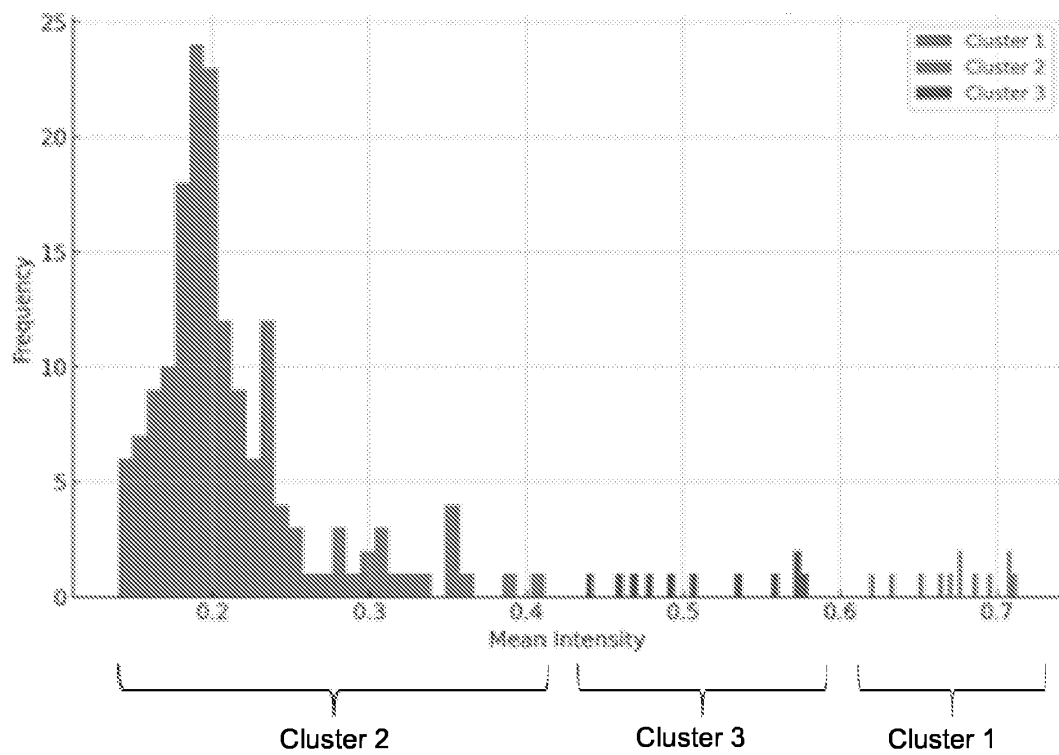
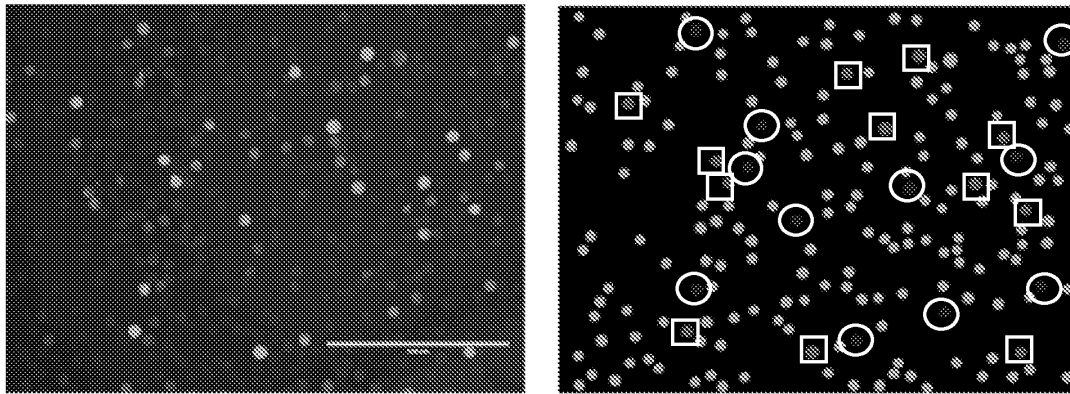


Figure 10

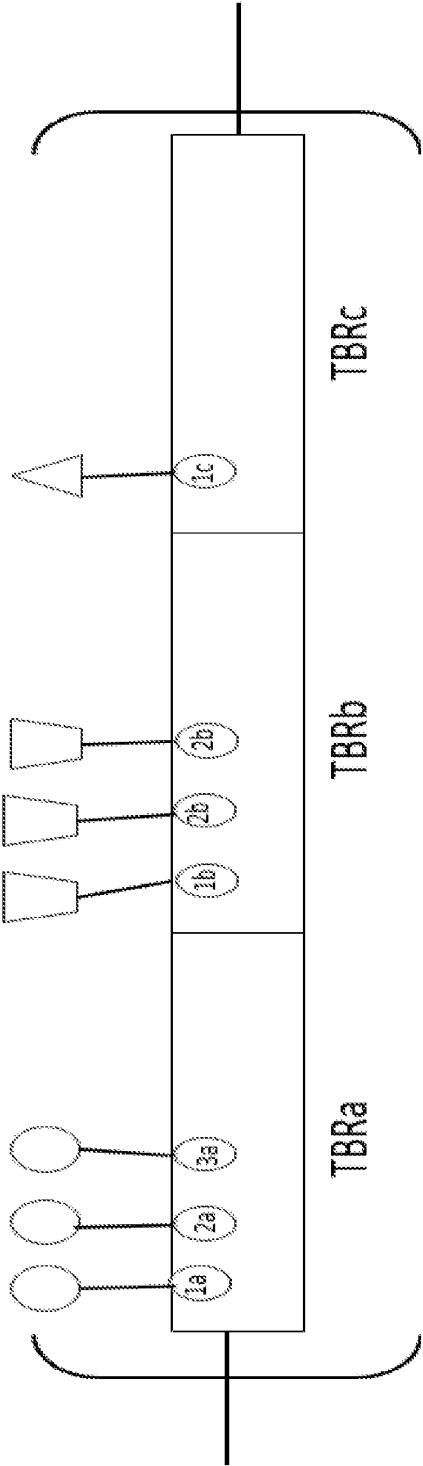


Figure 11

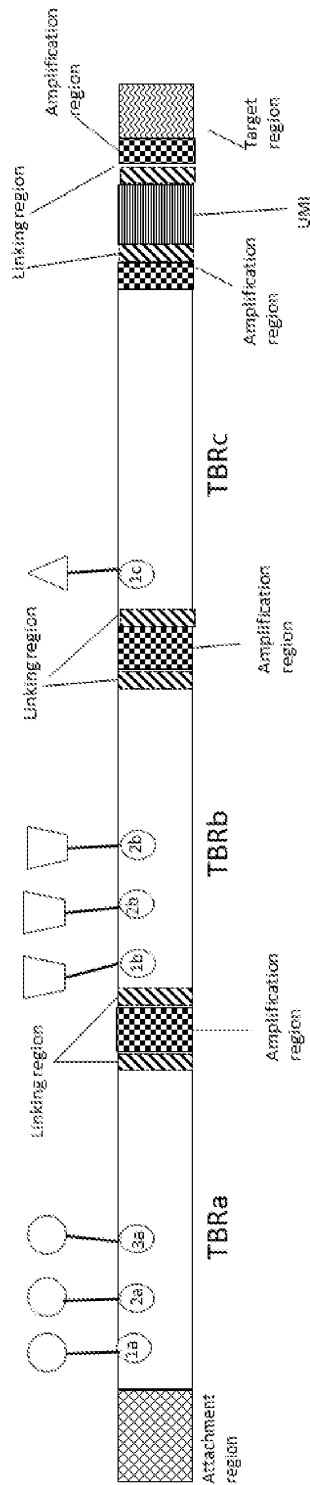


Figure 12

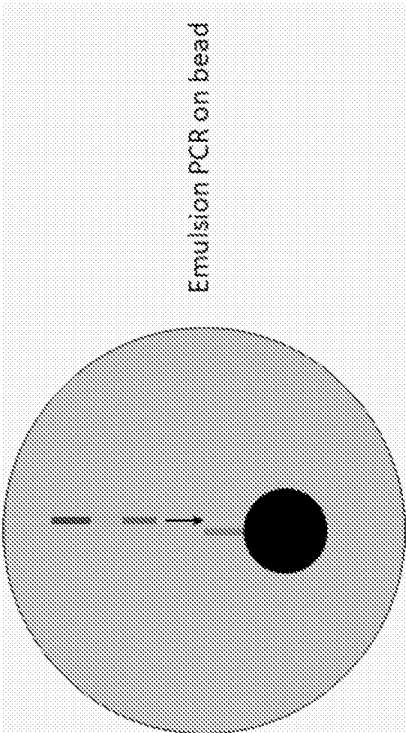
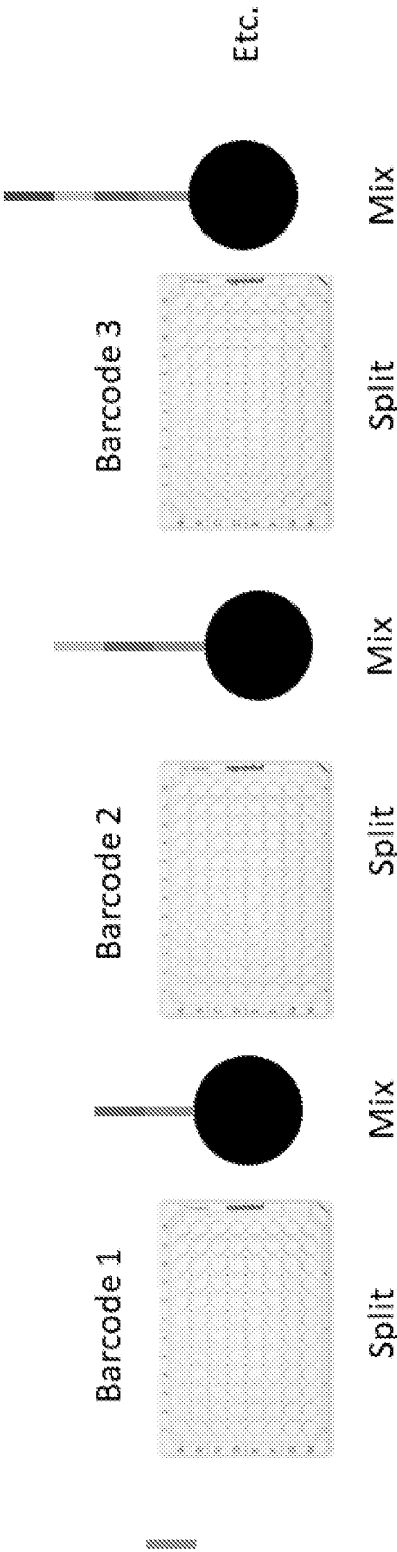
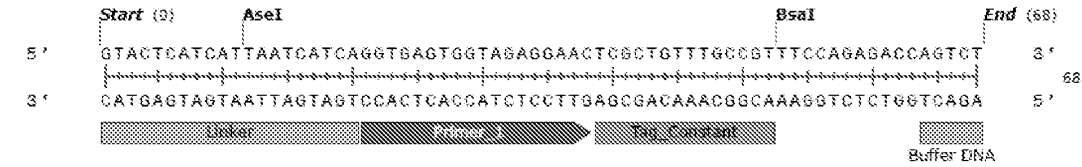
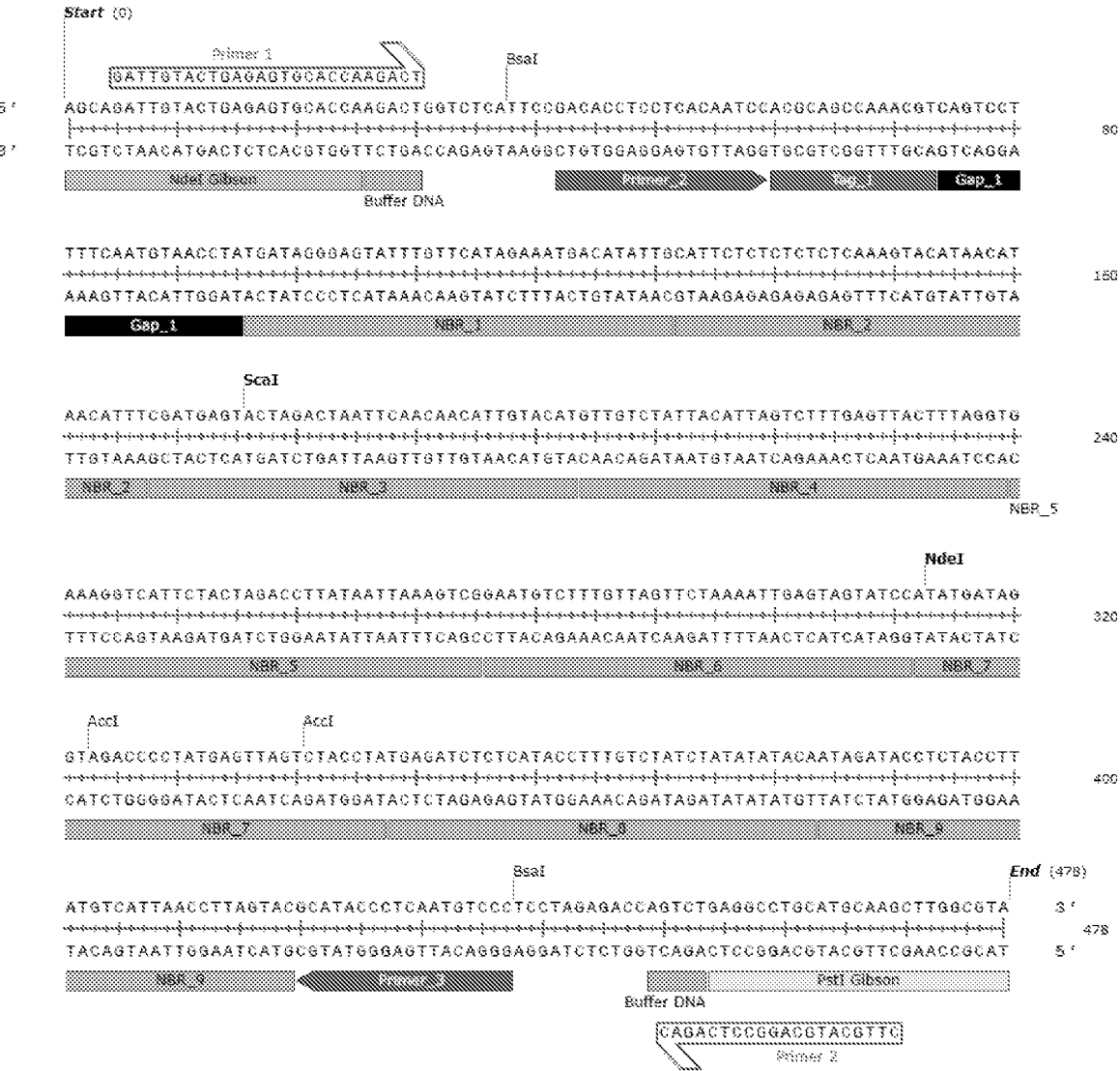


Figure 13

Linker 1 (SEQ ID NO:1)



tag 1_first (SEQ ID NO: 3)



Start (0) **ApaI** **BaeGI**
 BsiHKAI
 BspI286I
 BmeI580I **BseRI**

5' AGCAGATTGTACTGAGAGTGCACCAAGACTGGTCTCATTCCGACACCTCCTCACAATCCACGCAGCCAAAAGTCAGTCCT
 3' TCGTCTAACATGACTCTCACGTGGTTCTGACCAGAGTAAGGCTGTGGAGGAGTGTTAAGGTGCTCGGTTTGCAGTCAGGA

Ndel Gibson Buffer DNA Primer_2 Tag_1 Gap_3

AclI

TTTCAATGTAACCTAACGCAGCCAAACGTTGAAATGTTGAGAGAATGTATCCATTCTCTCTCTCAAAGTACATAACAT
 AAGATTACATTGGATTGGCTCGGTTTGCACCTTTACAACCTCTCTTACATAGGTAAGAGAGAGAGAGAGTTCATGTATTGTA

Gap_1 Nbr_1 Gap_2 Nbr_2

MslII **ScaI** **BsrGI** **PciI**
 ARIIII

AACATTTGATGAGTACTAGACTAATTCACAACATTGTACATGTTGTCTATTACATTAGTCTTTGAGTTACTTTAGGTG
 TTGTAAGCTACTCATGATCTGATTAAAGTTGTTGTAACATGTACAACAGATAATGTAATCAGAAACTCAATGAAATCCAC

Nbr_2 Nbr_3 Nbr_4

PsiI **NdeI**

AAAAGTCATTCTACTAGACCTTATAATTAAGTCGGAATGCTTTGTAGTTCTAAAATTGAGTAGTATCCATATGATAG
 TTTCCAGTAAGATGATCTGGAATATTAAATTCAGCCTTACAGAAACAATCAAGATTTTAACTCATCATAGGTATACTATC

Nbr_5 Nbr_6 Nbr_7

MflI*
 BglII
 BstYI

GTAGACCCCTATGAGTTAGTCTACCTATGAGATCTCTCATACCTTTGTCTATCTATATACAATAGATACCTCTACCTT
 CATCTGGGATACTCAATCAGATGGATACTCTAGAGAGTATGGAACAGATAGATATATATGTTATCTATGGAGATGAA

Nbr_7 Nbr_8 Nbr_9

StuI **SphI** **HindIII** **End** (478)

ATGTCATTAAACCTTAGTACGCATACCCCTCAATGTCCCTCCTAGAGACCAGTCTGAGGCGCTGCATGCAAGCTTGGCGTA
 TACAGTAATTGGAATCATGCGTATGGAGTTACAGGGAGGATCTCTGGTCAGACTCCGACGTACSTTCGAACCGCAT

Nbr_9 Primer_3 PciI Gibson

Buffer DNA

3' 478
 5'

BaeGI
 BsiHKA1
 Bsp1286I
 Bme1580I

Start (0) ApaLI BseRI

5' AGCAGATTCTACTGAGAGTSCACCAAGACTGGTGTCTTCGACACCTCCTCACAATCDAACGACCCAAACGTCAGTCTT
 3' TCGTCTAACATGACTCTCACGTGGTCTTGACCAGAGTAAGGCTGTGGAGGAGTGTAGGTGCGTCTGGTTTGCAGTCAAGGA

NdeI Bglam Buffer DNA

AclII

160 TTTCAGTGAACCTAAGCCAGCCAAACGTTGAAATGTTGAGAGAAATBTATCAGCAGCCAAACGTAATGAGAGTACATCA
 AAGATTACATTGGATTGCGTCTGGTTTSCAACTTTACAACCTCTCTTACATAGTGCATCGGTTTGCATTACTCTCATGTAGT

Gap_1 Tsp_1 Gap_2 Tsp_1 Gap_3

ScaI BsrGI PciI AflIII

240 ACATAGTCGATGAGTACTAGACTAATTCAACAACACTTGTACATGTTGTCTATTACATTAGTCTTTGAGTTACTTTAGGTTG
 TGTATCAGCTACTCATGATCTGATTAAGTTGTTSTAACATGTACAACAGATAATGTAATCAGAAACTCAATGAAATCCAC

Gap_3 NBR_3 NBR_4 NBR_5

PstI NdeI BclVI

320 AAAGGTCATTCTACTAGACCTTATAATTAAGTCCGAATGTCTTTGTTAGTTCTAAAATTGAGTAGTATCCATATGATAG
 TTTCCAGTAAGATGATCTGGAATATTGATTTGAGCCTTACAGAAACAAATCAAGATTTTAACTCATCATAGGTATACTATC

NBR_5 NBR_6 NBR_7

MfiI*
 BglII
 BstYI

400 GTAGACCCCTATGAGTTAGTCTACCTATGAGATCTCTCATACCTTTTGTCTATCTATATATACAATAGATACCTCTACCTT
 CATCTGGGATACTCAATCAGATGGATACTCTAGAGAGTATGSAACAGATAGATATATATGTTATCTATTGGAGATGAA

NBR_7 NBR_8 NBR_9

StuI SphI HindIII End (479)

478 ATBTCTATTAACTTATGATACCATACCTCATATGTCCTCTCTAGAGACCACTCTGAGGCTGCATGCAACCTTGGCGTA
 TACAGTAATTTGAATCATGCGTATGGGAGTTACAGGGAGGATCTCTGCTCAGACTCCGACGTACGTTTGAACCCGAT

NBR_9 BstYI Bglam

Buffer DNA

Figure 13 continued

tag 1_fourth (SEQ ID NO: 6)

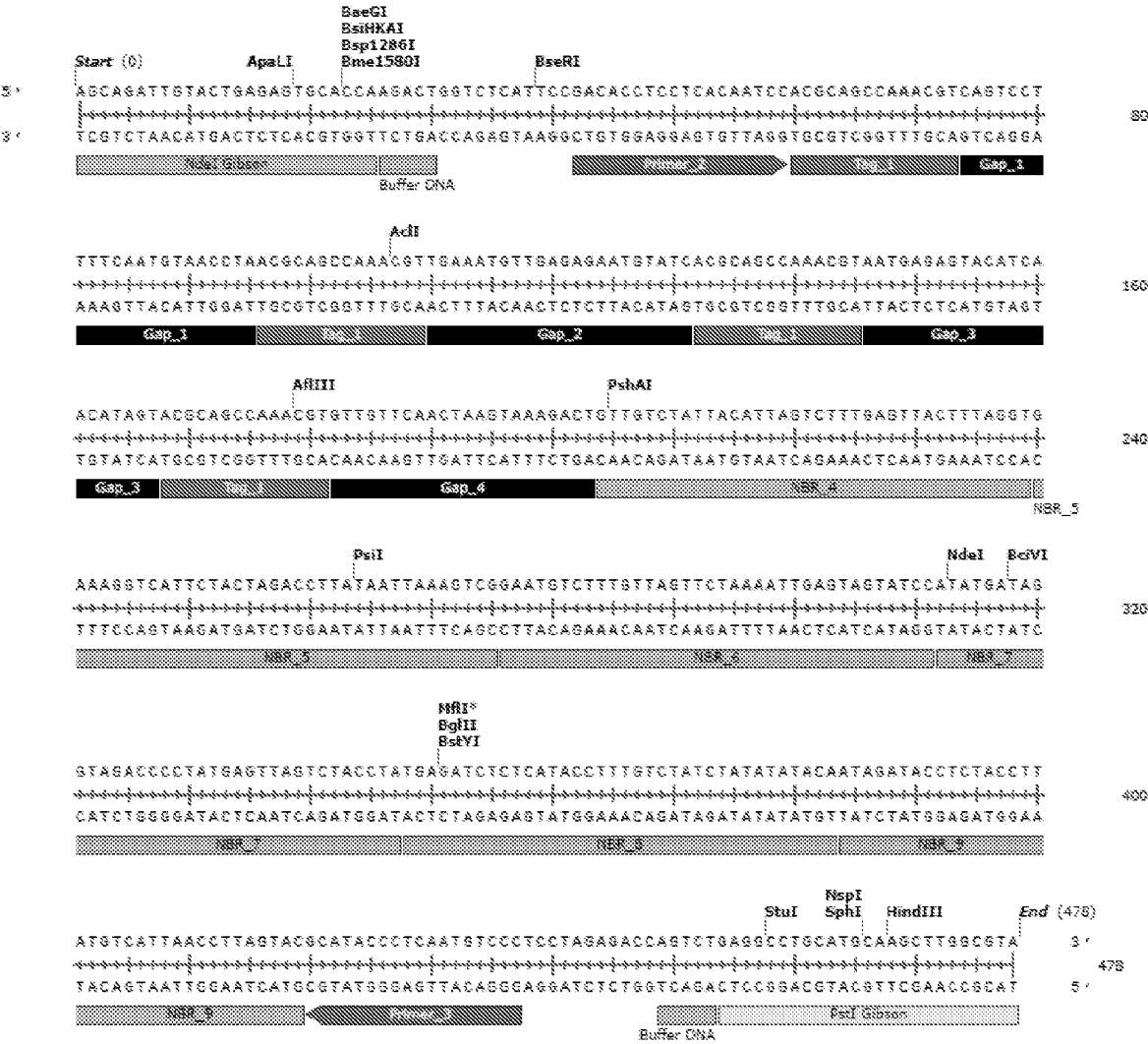
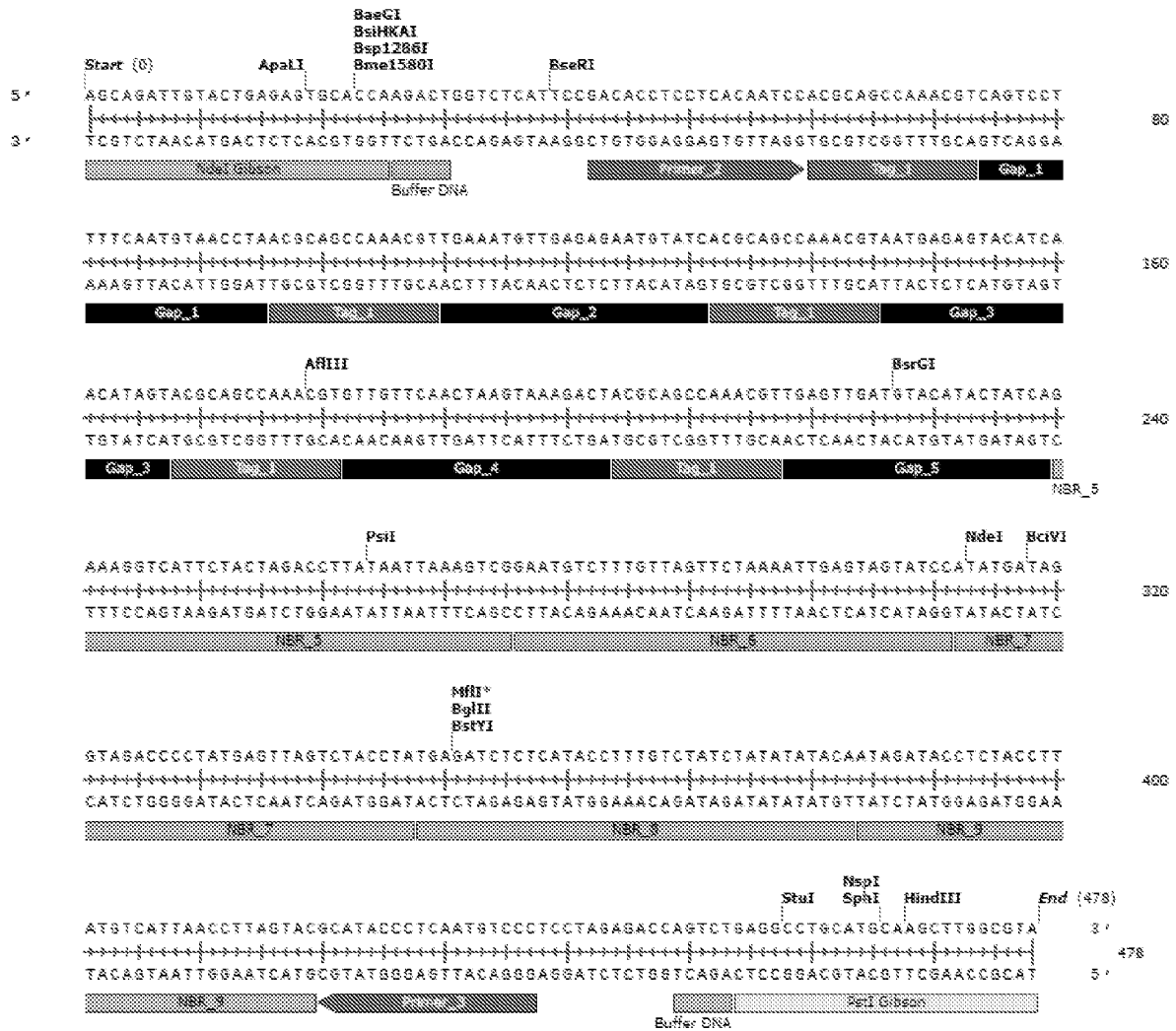


Figure 13 continued

tag 1_fifth (SEQ ID NO: 7)



[illegible]

Figure 13 continued

tag 1_seventh (SEQ ID NO: 9)

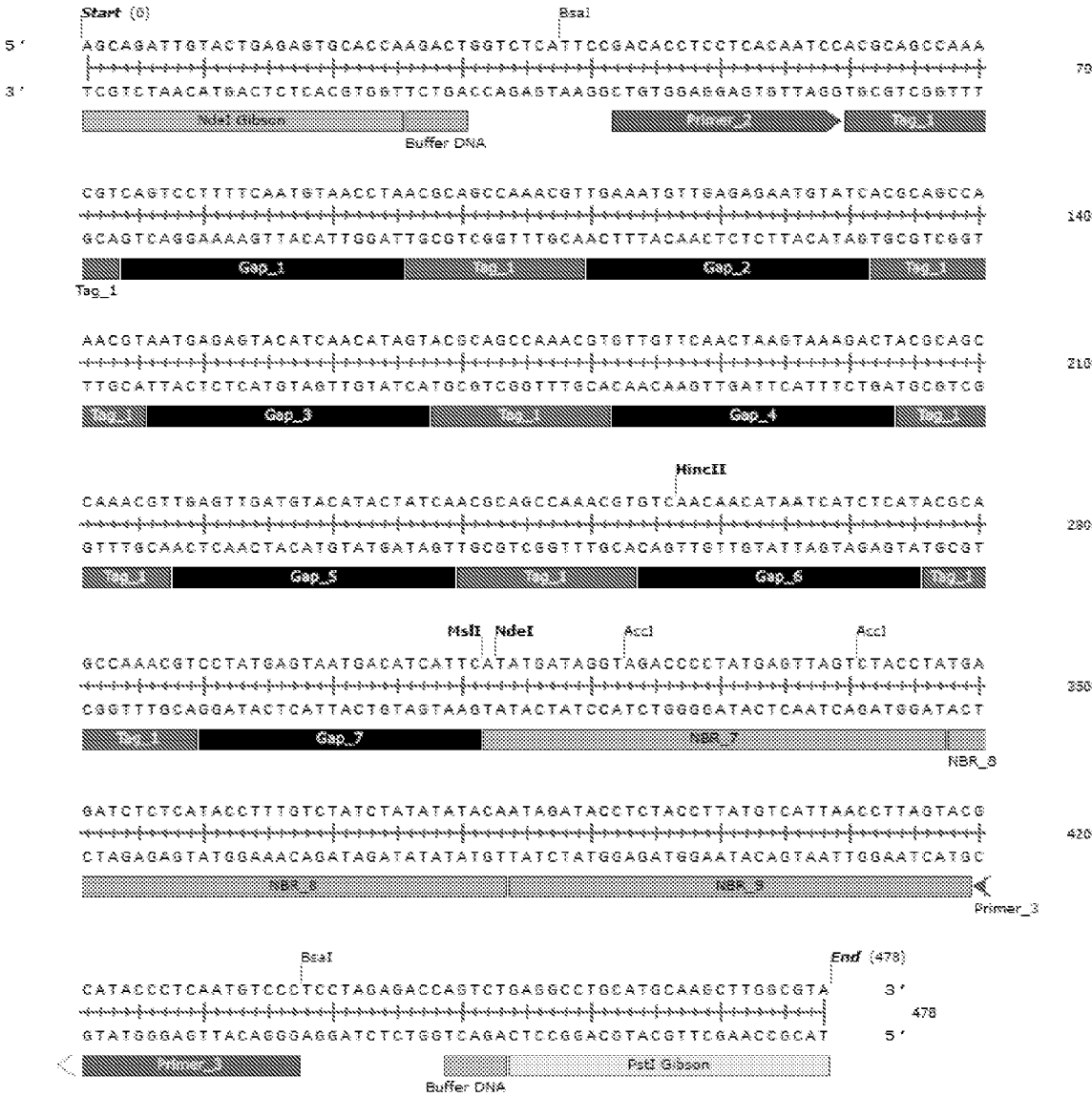


Figure 13 continued

tag 1_eigh (SEQ ID NO: 10)

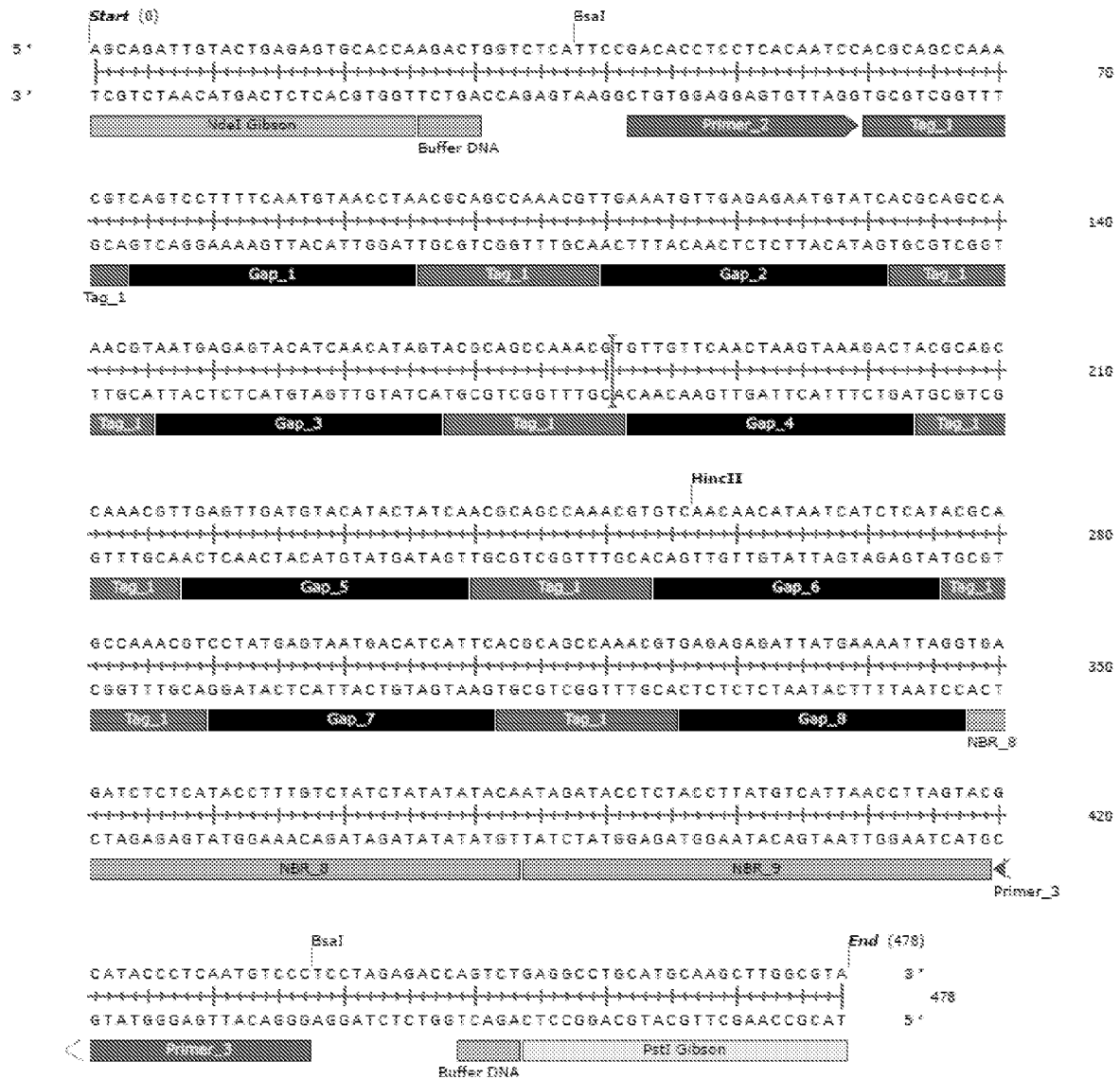


Figure 13 continued

tag 1_ninth (SEQ ID NO: 11)

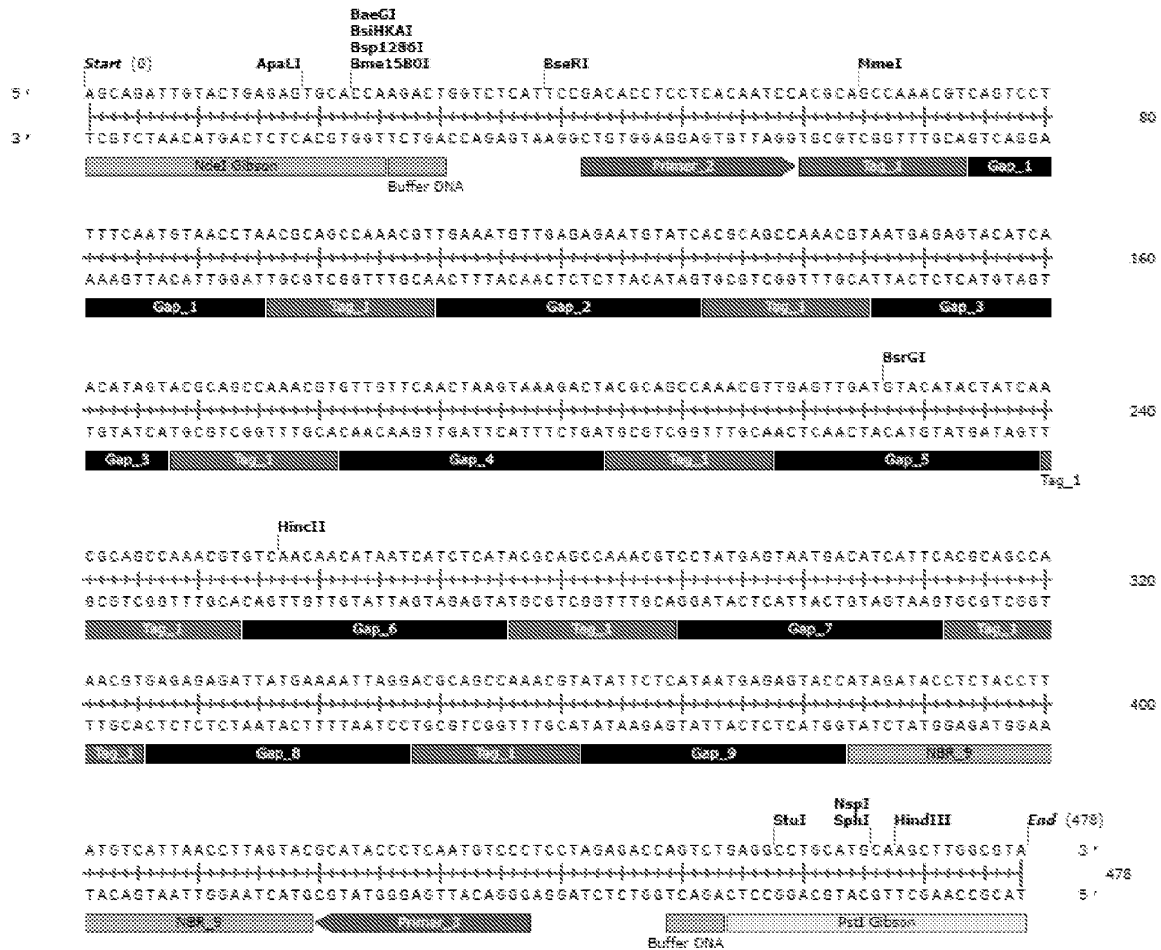
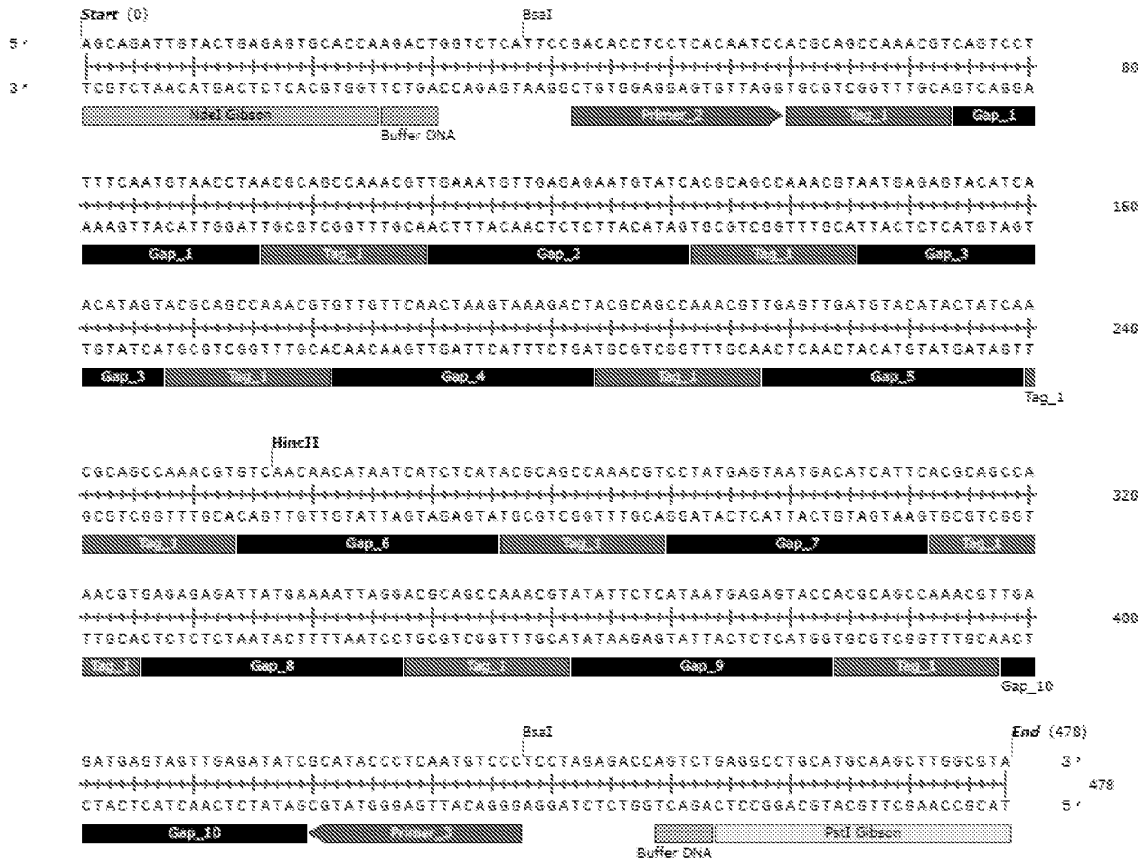


Figure 13 continued

tag 1_tenth (SEQ ID NO: 12)



tag 2_first (SEQ ID NO: 13)

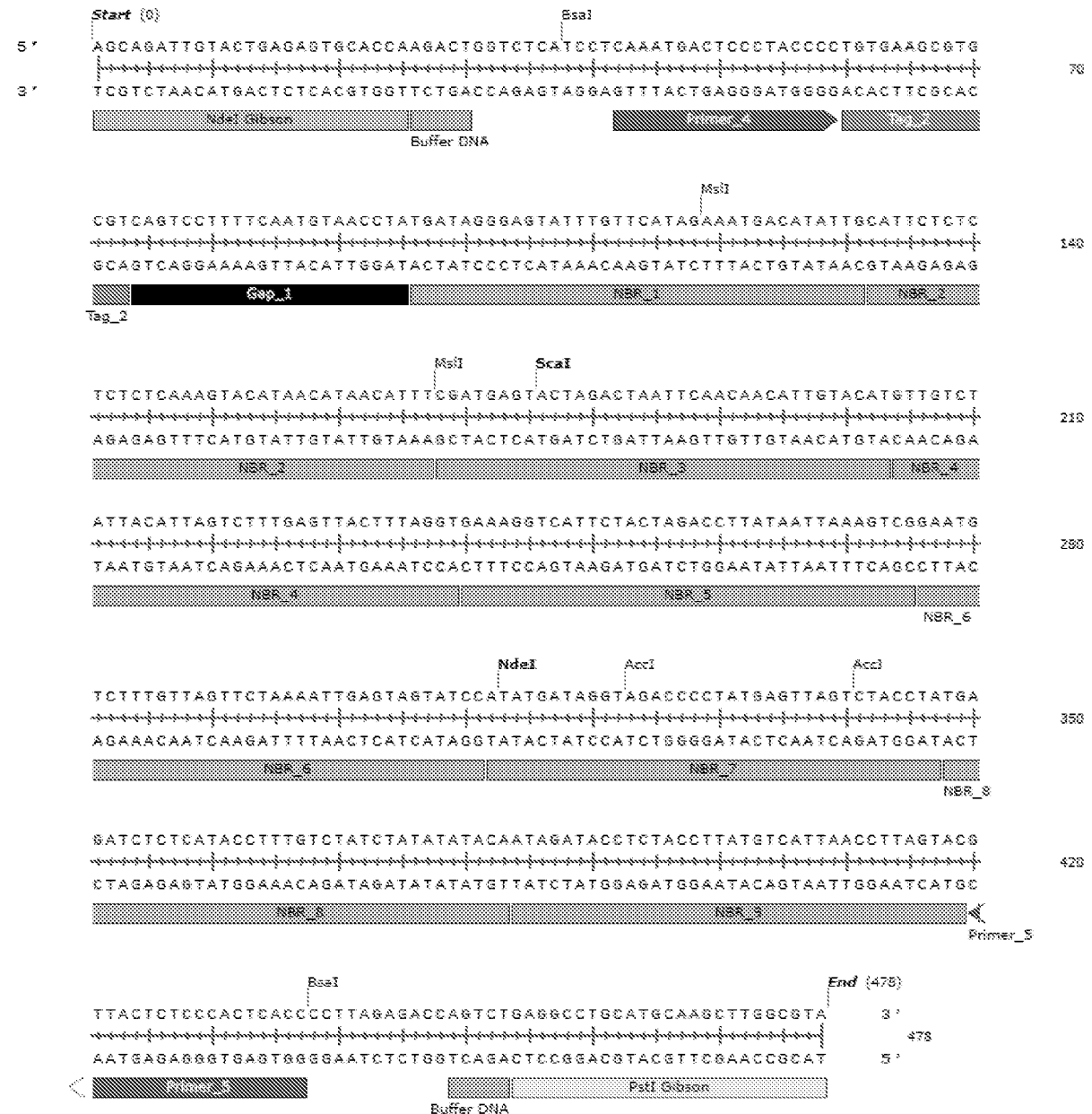


Figure 13 continued

tag_2_second (SEQ ID NO: 14)

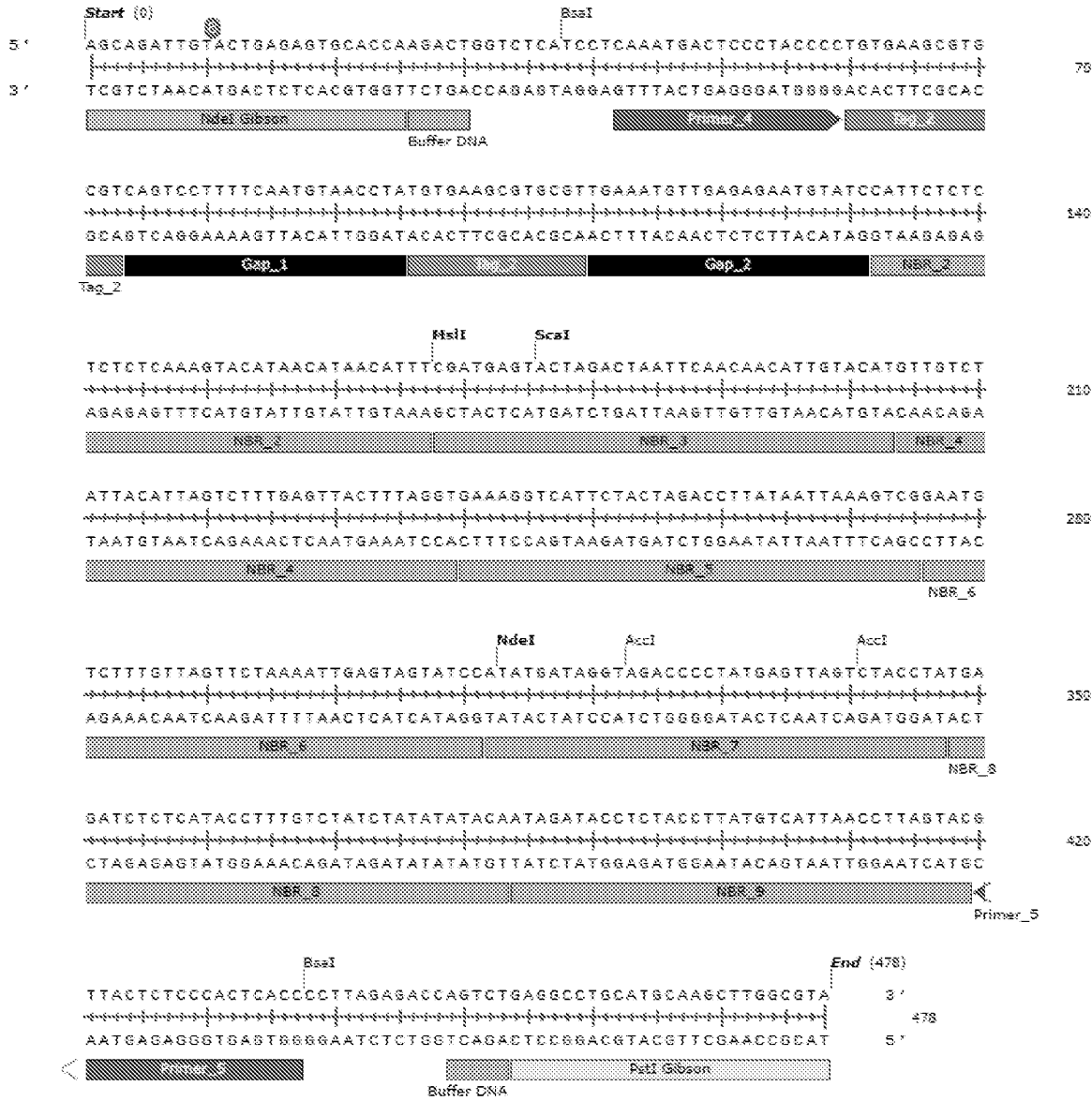


Figure 13 continued

tag_2_third (SEQ ID NO: 15)

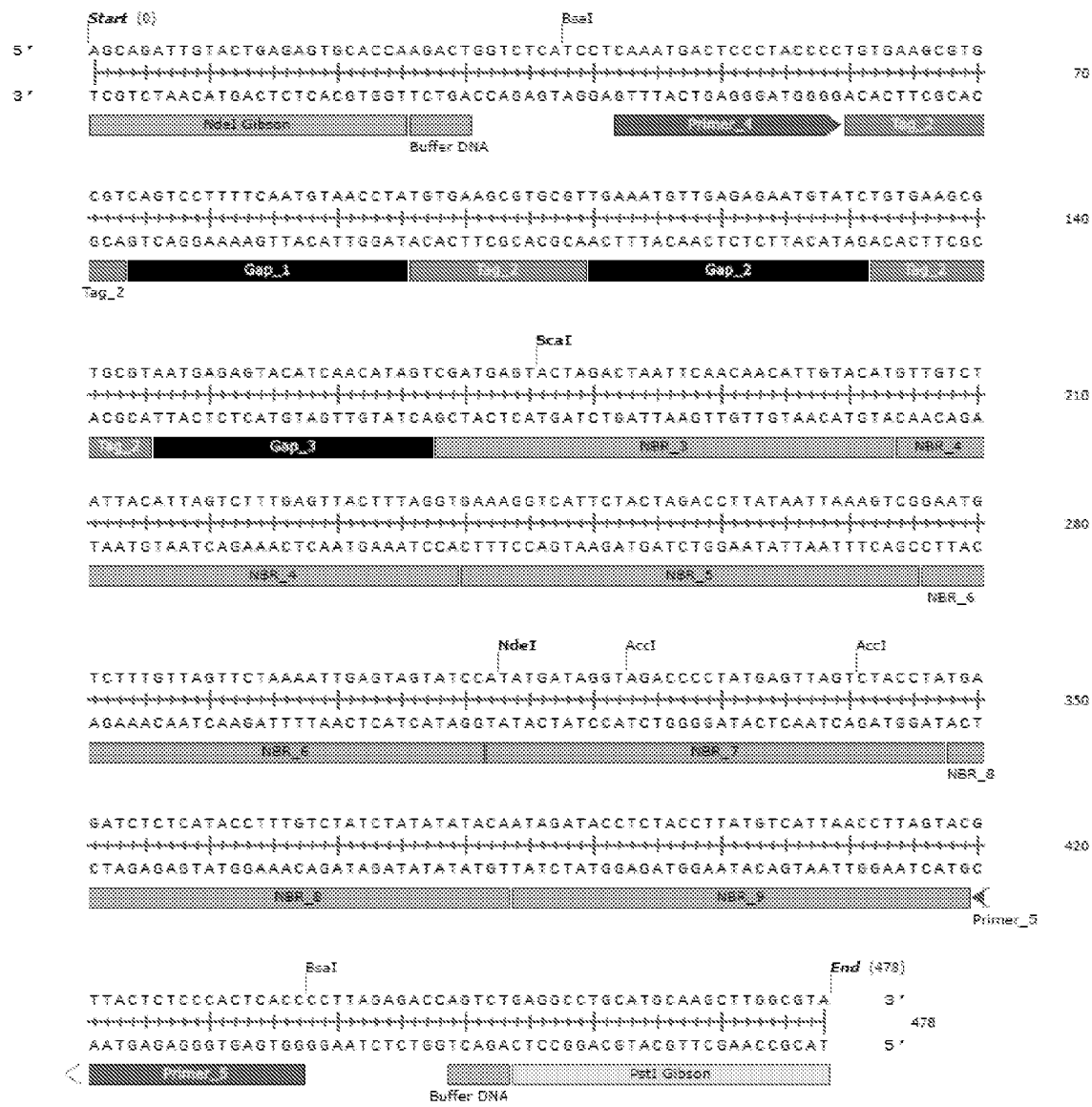


Figure 13 continued

tag_2_fourth (SEQ ID NO: 16)

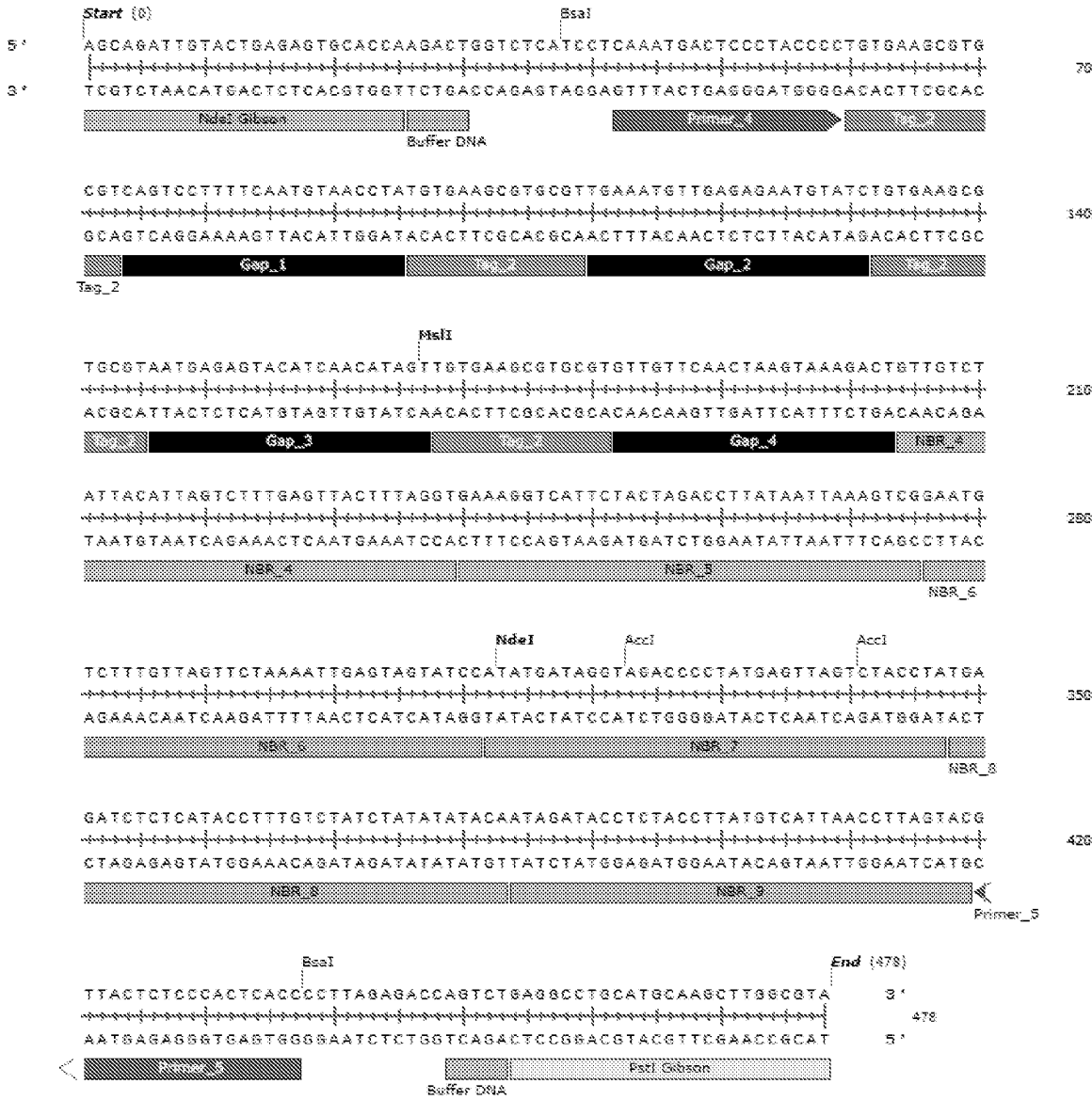


Figure 13 continued

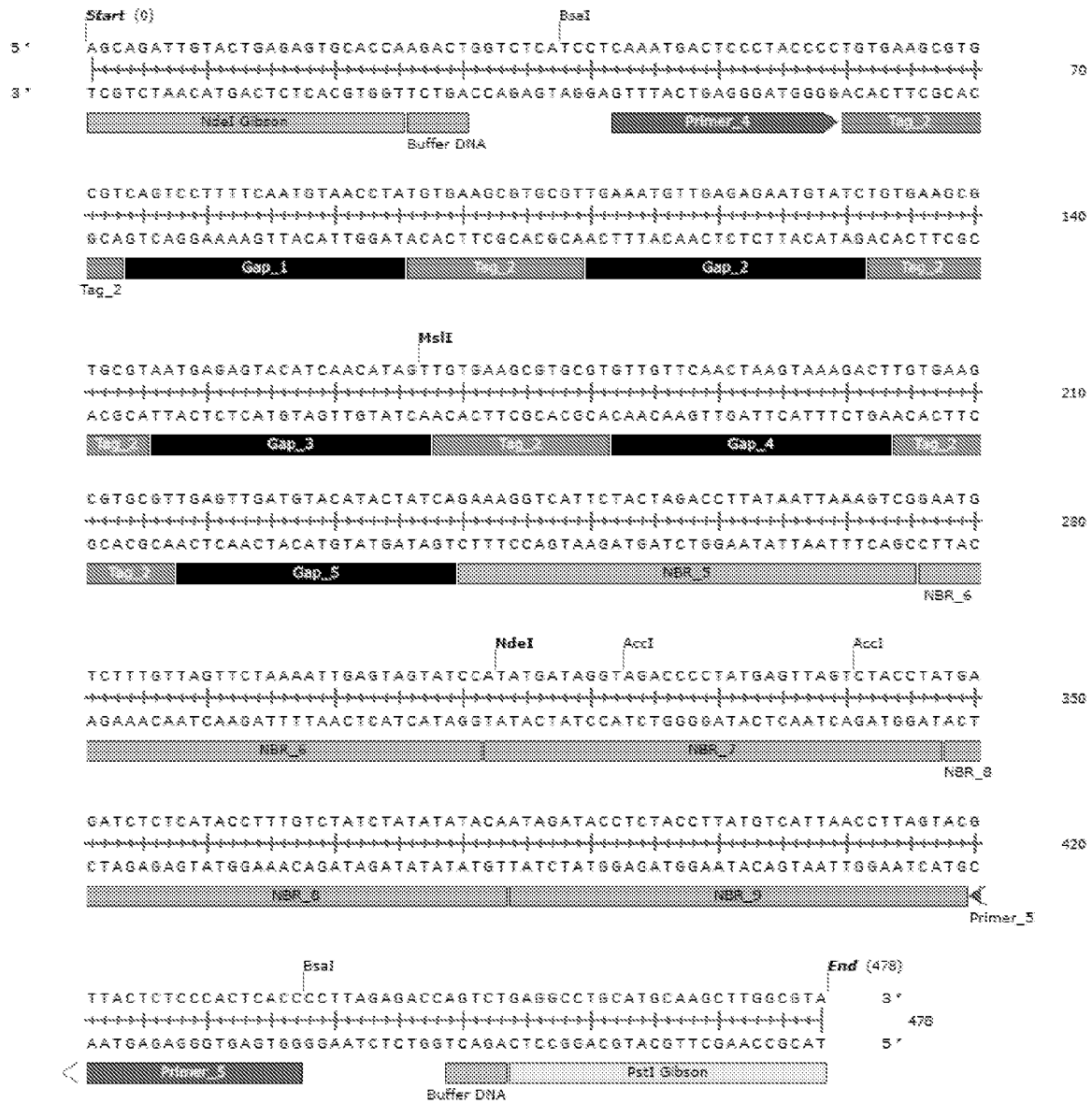
tag 2_{fifth} (SEQ ID NO: 17)

Figure 13 continued

tag 2_sixth (SEQ ID NO: 18)

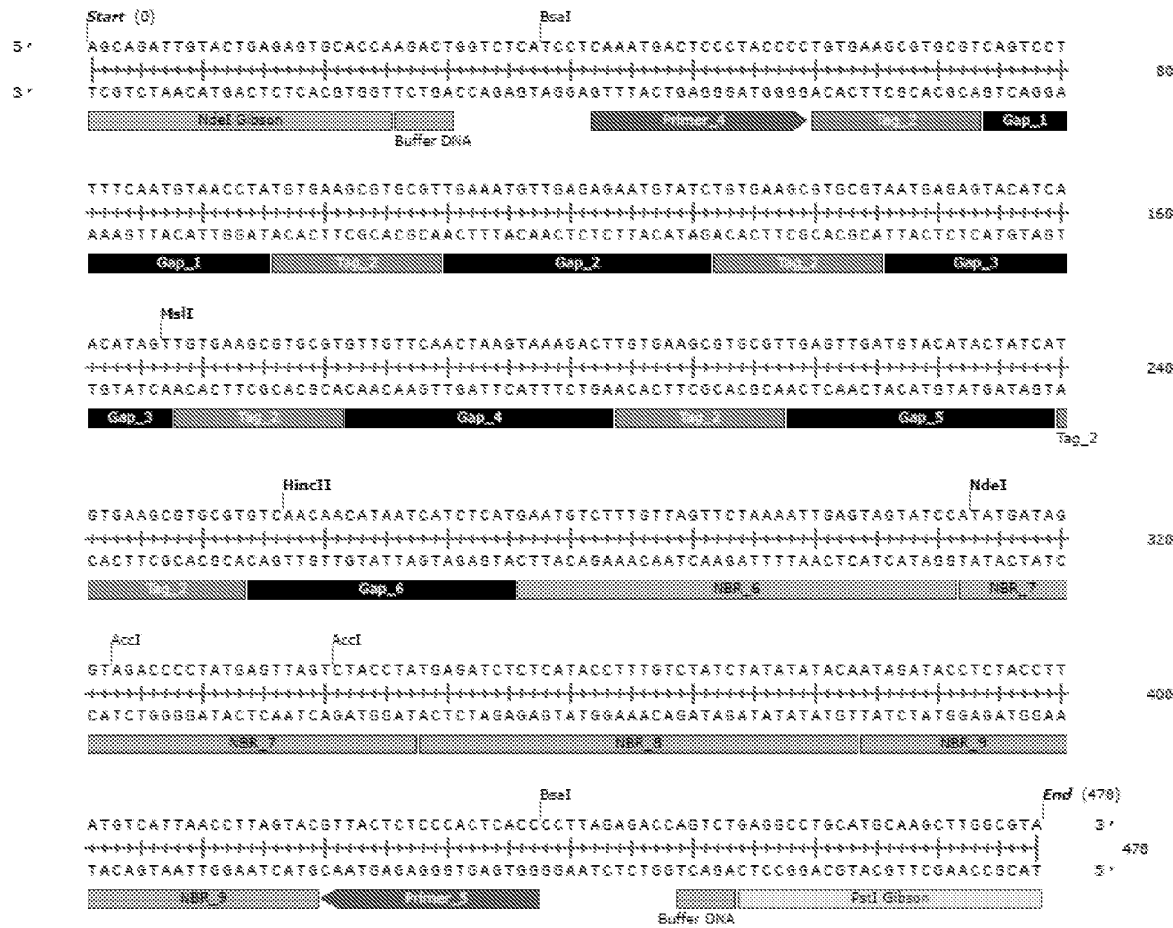


Figure 13 continued

tag 2_seventh (SEQ ID NO: 19)

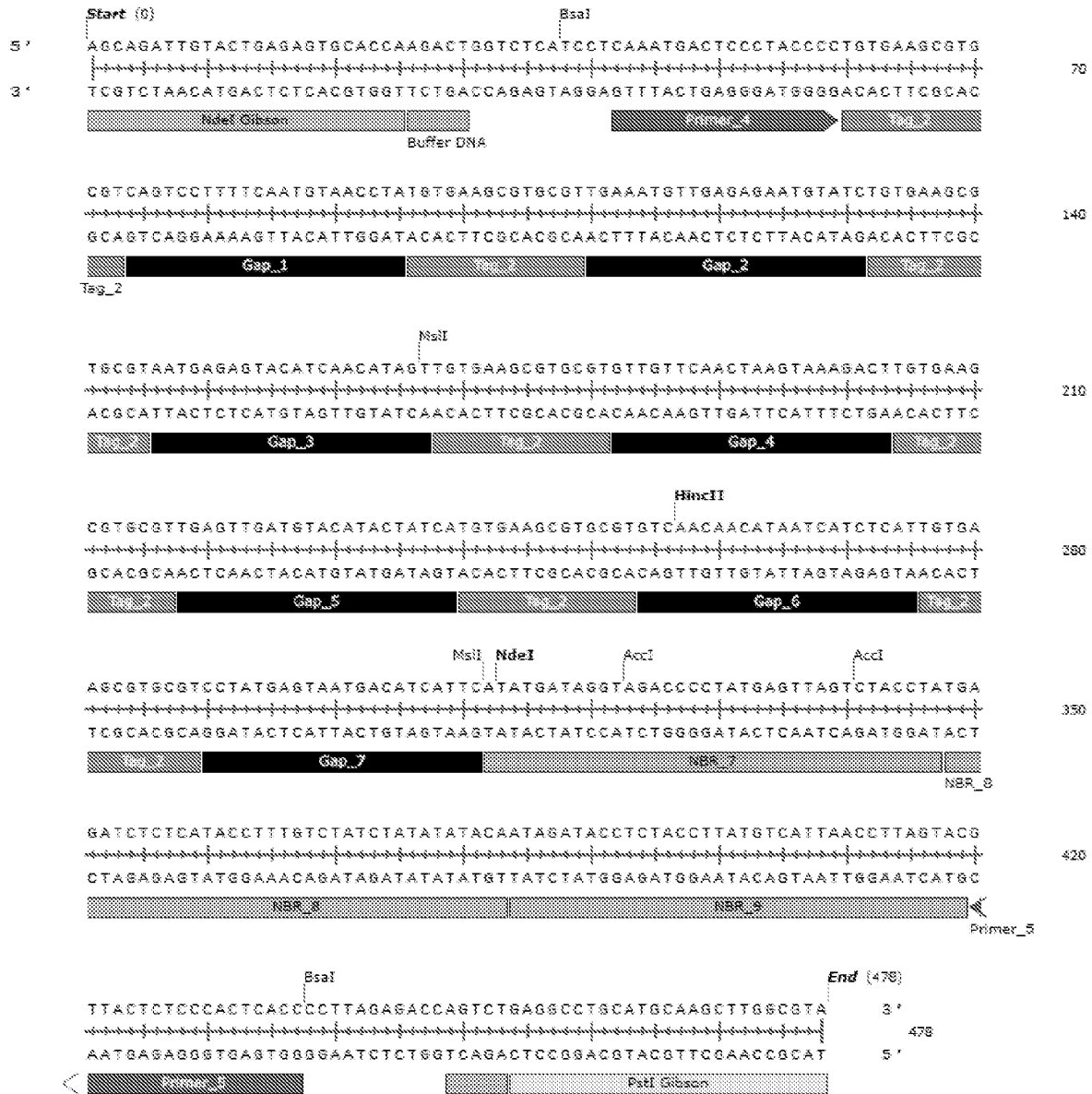


Figure 13 continued

tag 2_eigth (SEQ ID NO: 20)

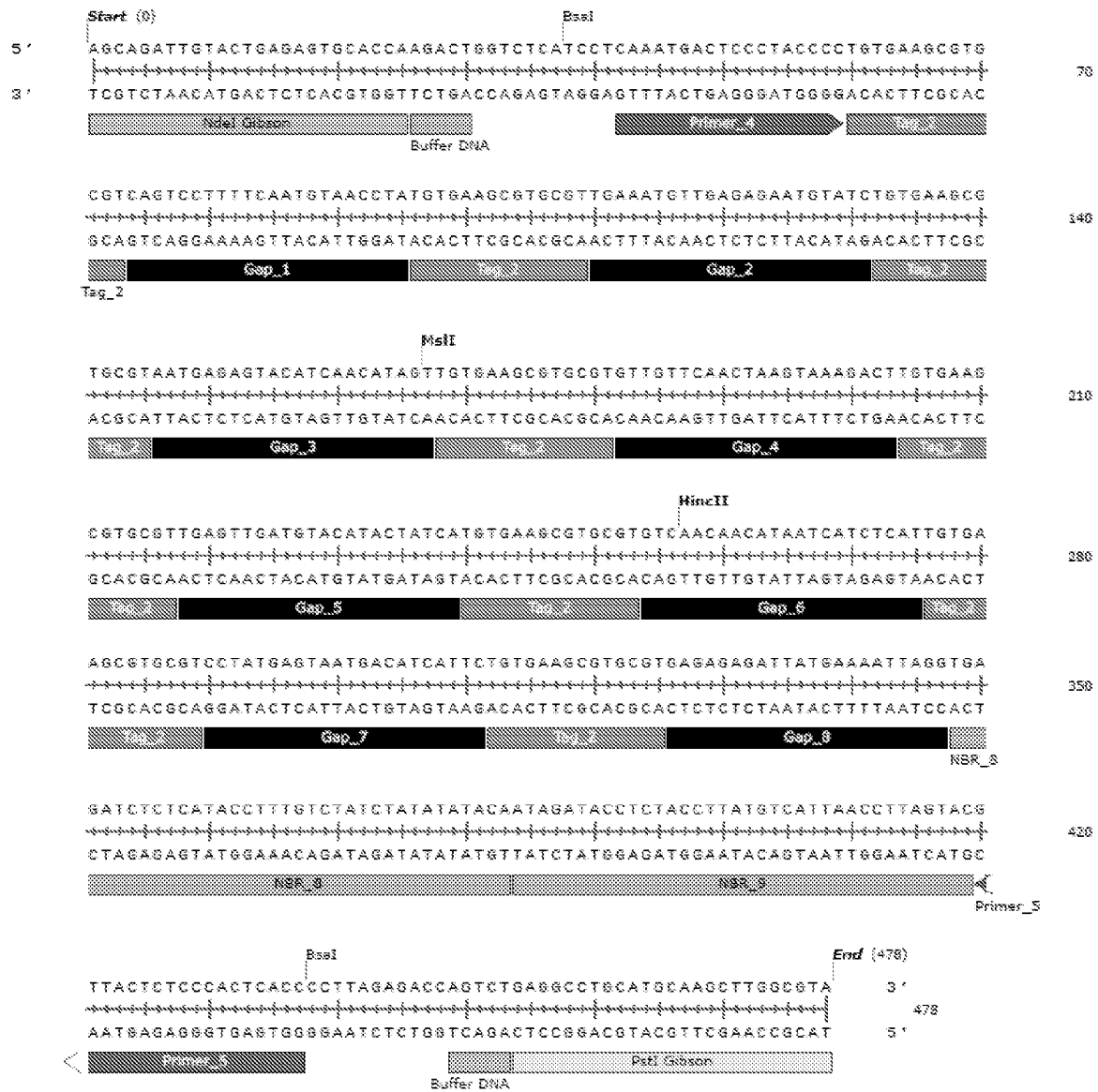


Figure 13 continued

tag 2_ninth (SEQ ID NO: 21)

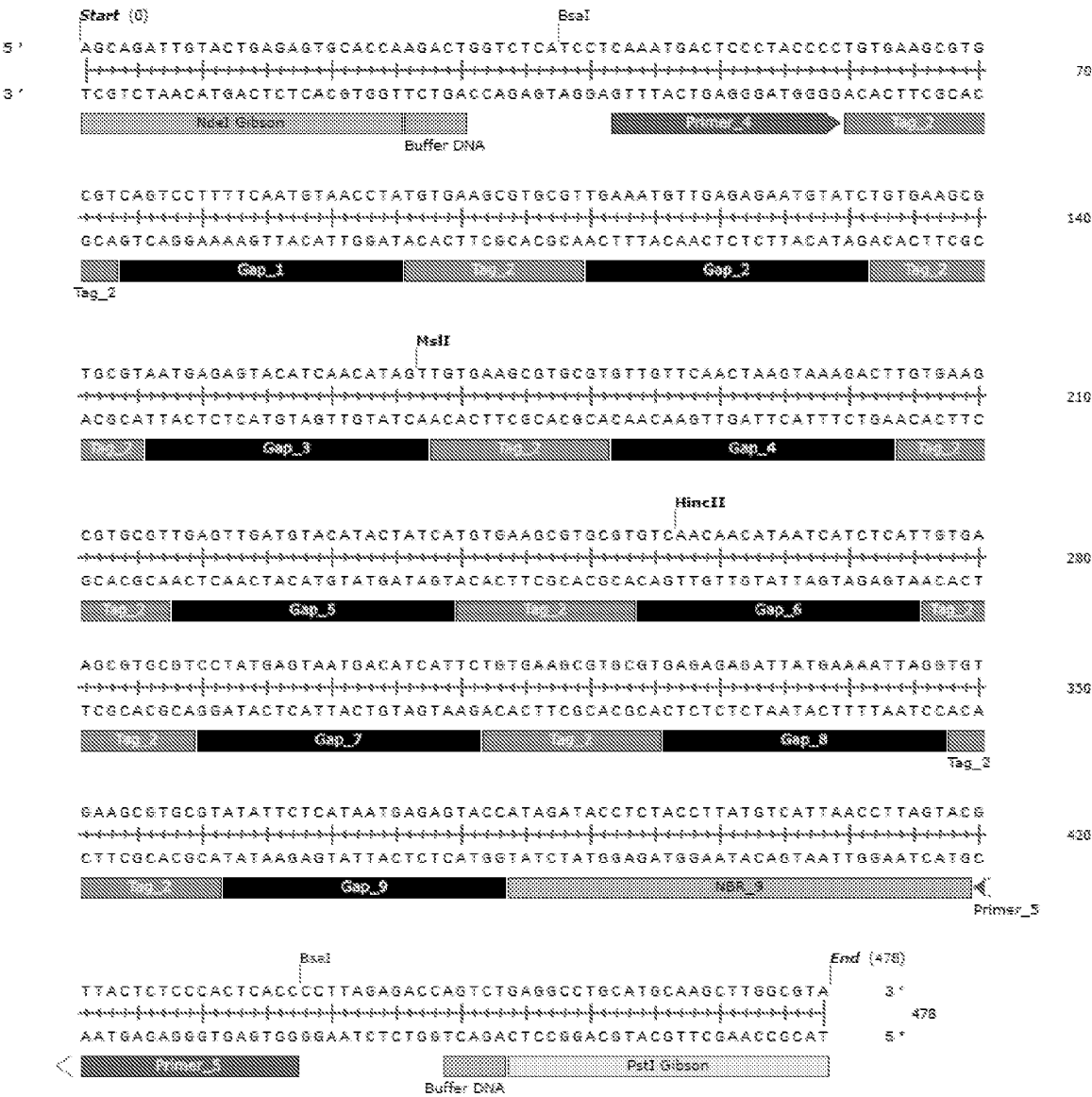


Figure 13 continued

tag 2_tenth (SEQ ID NO: 22)

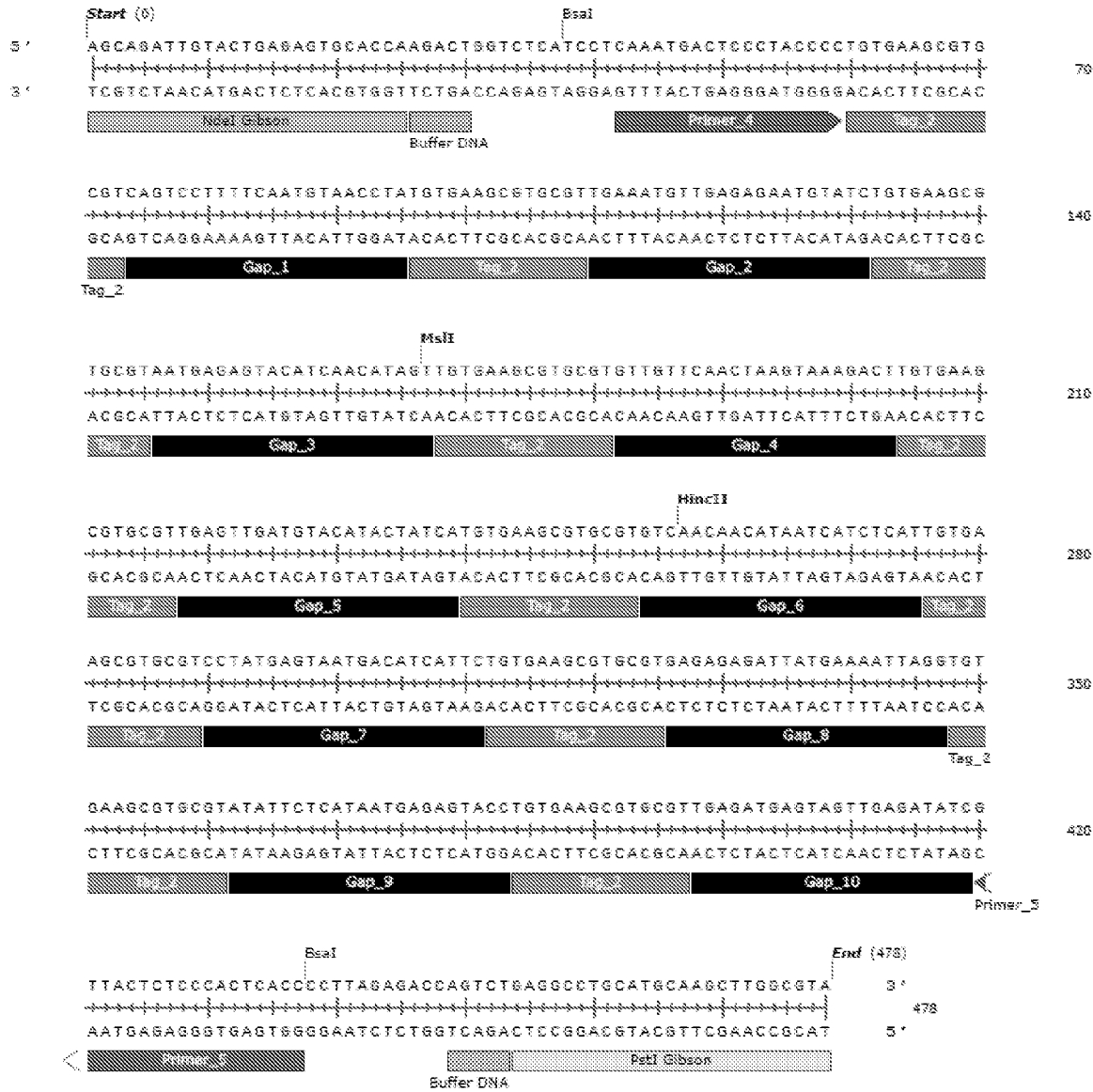


Figure 13 continued

tag_3_first (SEQ ID NO: 23)

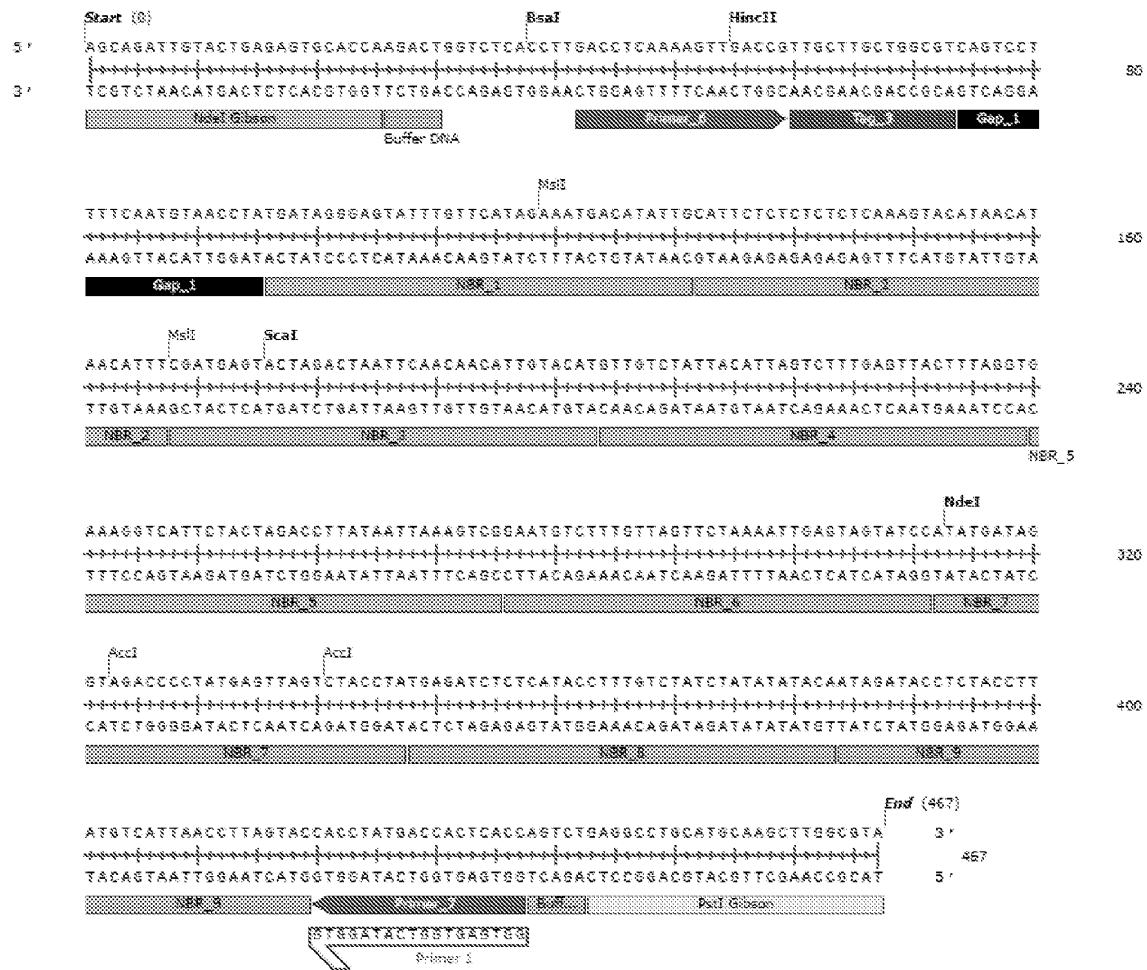
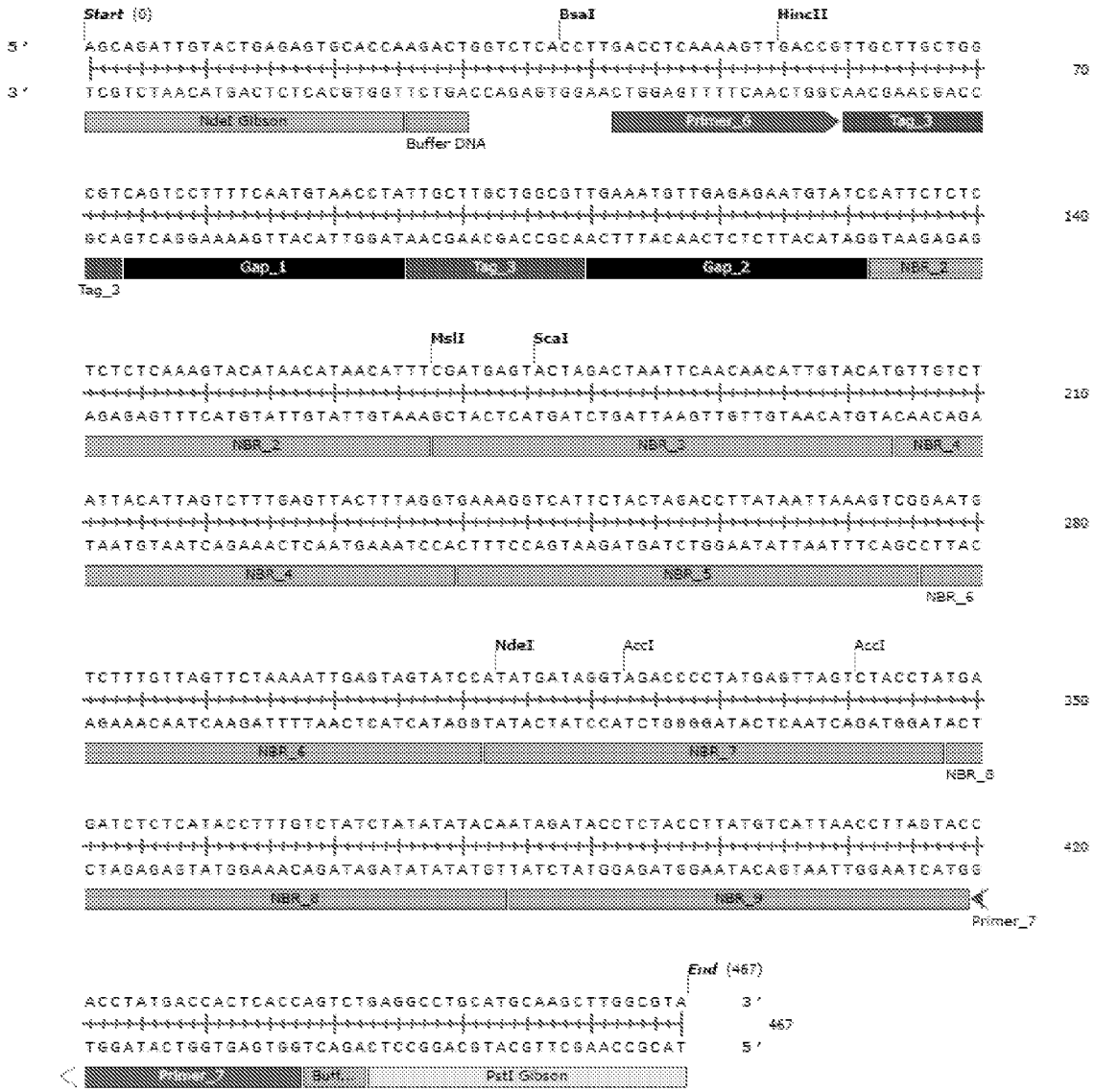


Figure 13 continued

tag 3_second (SEQ ID NO: 24)



Start (0) BsaI HincII

5' ATGCAGATTGTACTSAGAGTGCACCAAGACTGCTCTCACCTTGACCTCAAAAAGTTGACCGTTGCTTGCTGG 70

3' TCCTCTAACATGACTCTCACGTGTTCTSACCAGAGTGGAACTGGAGTTTTCAACTGGCAACGAACGACC

NdeI Gibson Buffer DNA PfuII 6 Tsp 3

CGTCAGTCCCTTTTCAATGTAACCTATTGCTTGCTGGCGTTGAAATGTTGAGAGAAATGTATCTTGCTTGCT 140

GCAGTCAGGAAAAGTTACATTGGATAACGAACGACCGCAACTTTACAACCTCTCTTACATAGAACGAACGA

Gap_1 Tsp 1 Gap_2 Tsp 2

Tag_3

GGCGTAATGAGAGTACATCAACATAGTCGATGAGTACTAGACTAATTCACAACATTGTACATGTTGTCT 210

CCGCATTACTCTCATGTAGTTGTATCAGCTACTCATGATCTGATTAAGTTGTTGTAAACATGTACAACAGA

Tag_3 Gap_3 NBR_3 NBR_4

ATTACATTAGTCTTTGAGTTACTTTAGGTGAAAGGTCATTCTACTAGACCTTATAATTAAAGTCGGAATG 280

TAATGTAATCAGAAACTCAATGAAATCCACTTTCCAGTAAGATGATCTGGAATATTAATTTGAGCCTTAC

NBR_4 NBR_5 NBR_6

TCCTTTGTTAGTTCTAAAATTGAGTAGTATCCATATGATAGGTAGACCCCTATGAGTTAGTCTACCTATGA 350

AGAAACAATCAAGATTTTAACTCATCATAGGTATACTATCCATCTGGGGATACTCAATCAGATGGATACT

NBR_6 NBR_7 NBR_8

GATCTCTCATACCTTTGTCTATCTATATATACAATAGATACCTCTACCTTATGTCATTAACTTAGTACC 420

CTAGAGAGTATGGAAACAGATAGATATATATGTTATCTATGAGAGTGAATACAGTAATTGGAATCATGG

NBR_9 NBR_9 Primer_7

ACCTATGACCACTCAACAGTCTGAGGCTTGCATGCAAGCTTGGCGTA 3' 467

TGGATACTGGTGAGTGGTCAGACTCCGGACGTACGTTTCGAACCGCAT 5'

Primer_7 PfuII PstI Gibson

Figure 13 continued

tag 3_fourth (SEQ ID NO: 26)

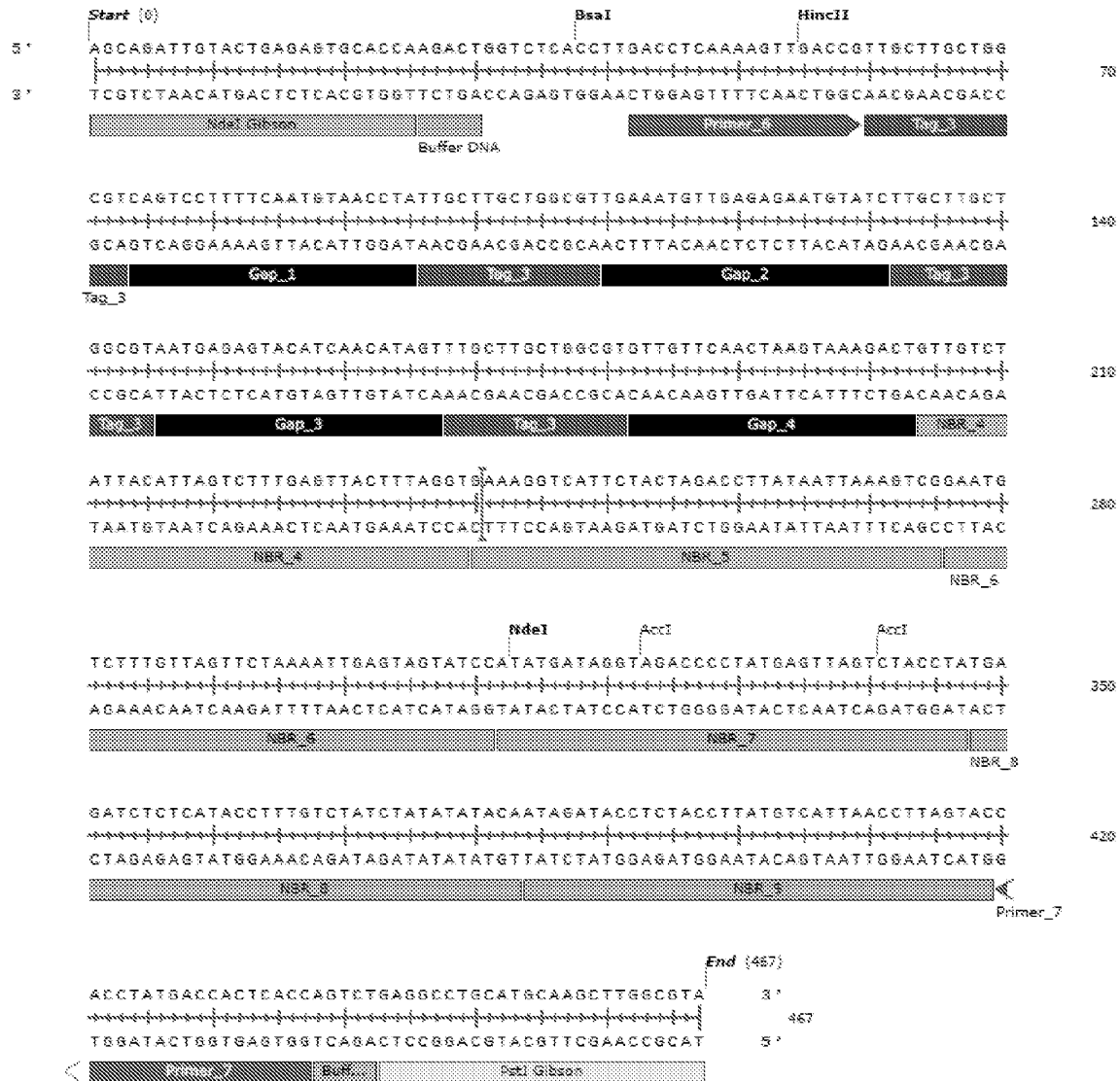


Figure 13 continued

tag 3_fifth (SEQ ID NO: 27)

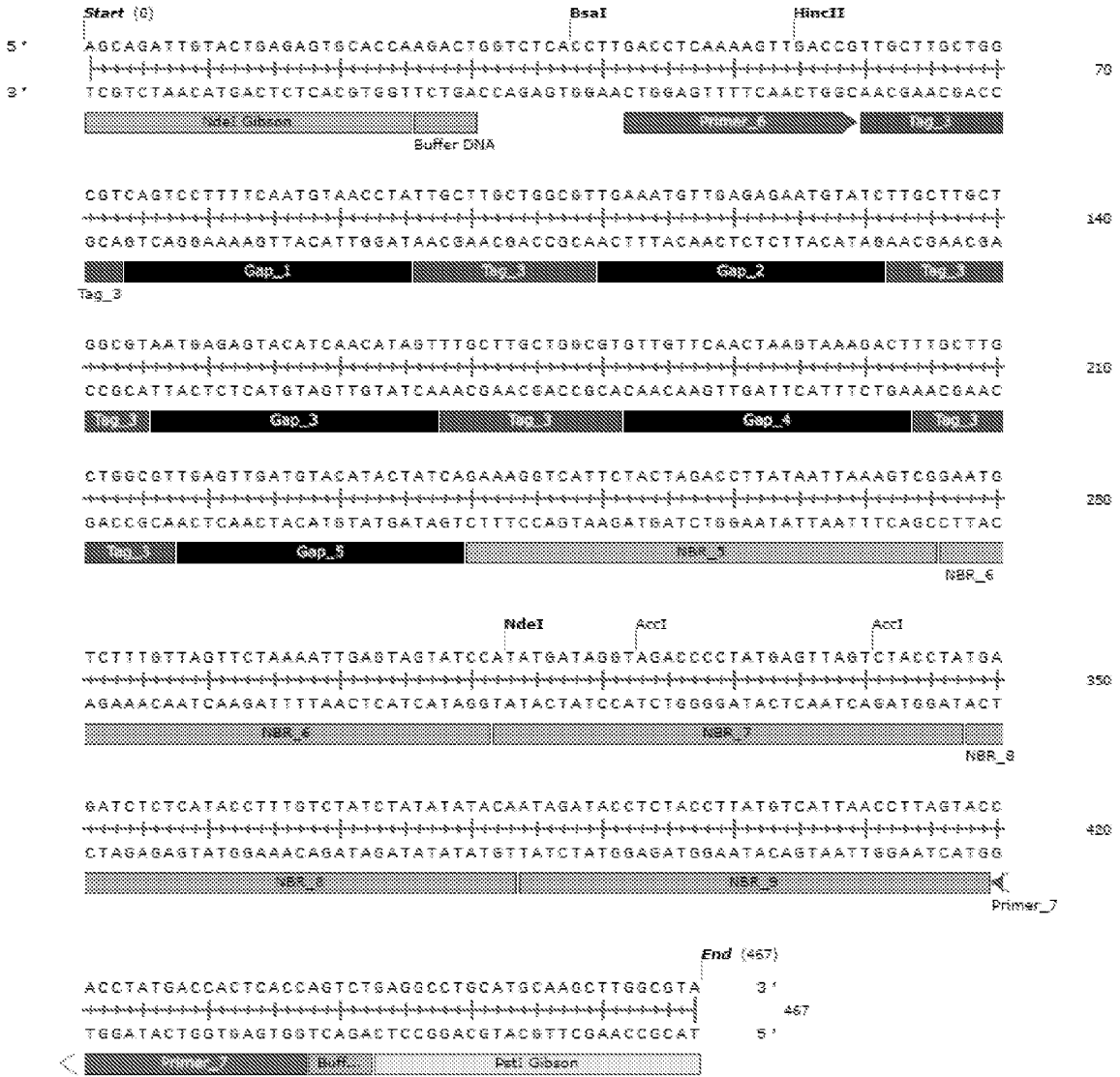
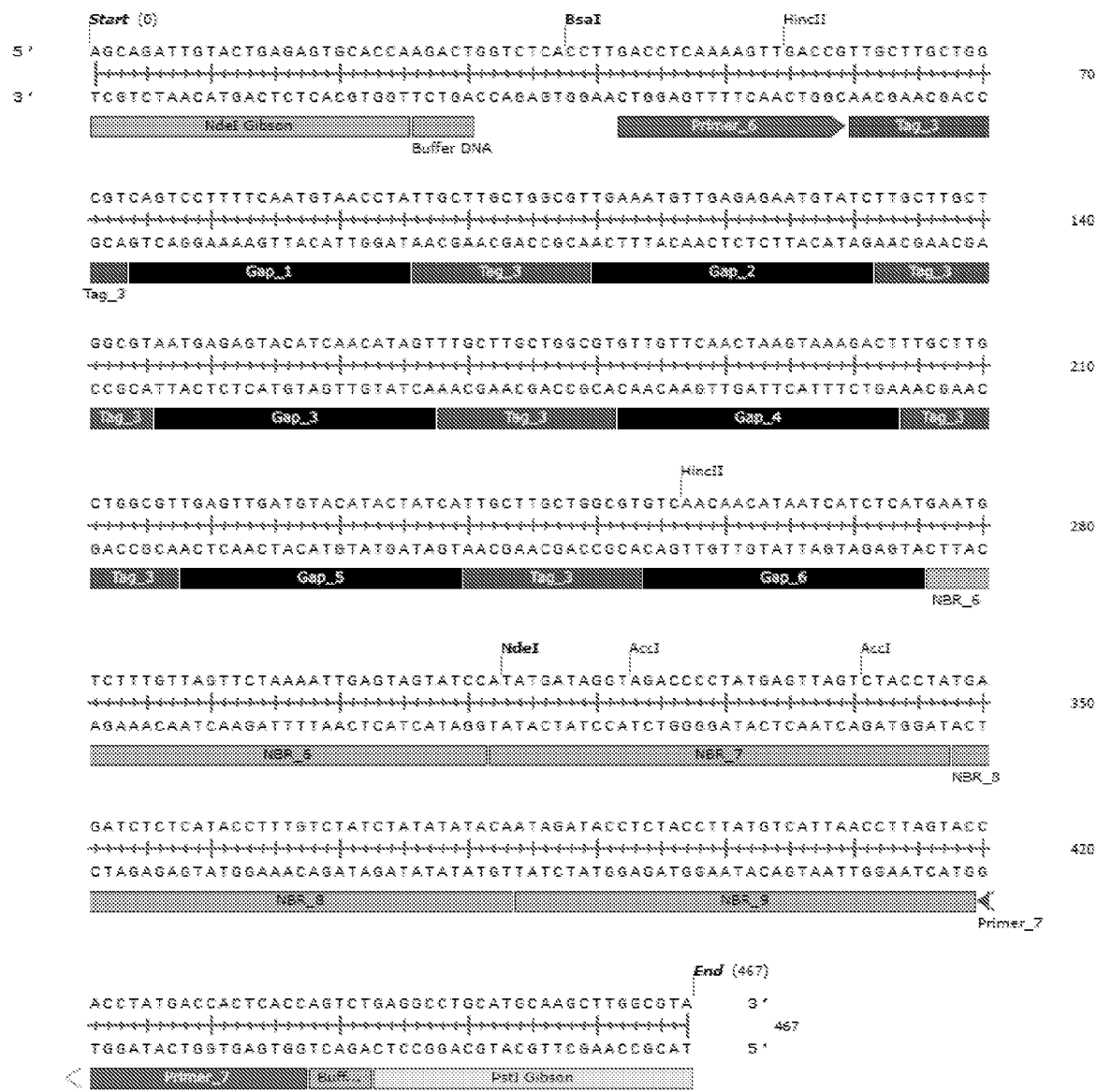


Figure 13 continued

tag 3_sixth (SEQ ID NO: 28)



Start (0)

5' ATCCAGATTGTACTGAGAGTGCACCAAGACTGGTCTCACCCTTGACCTCAAAGAGTTGACCGTTGCTTGTCTGG

3' TGGTCTAACATGACTCTCAGGTGGTCTCTGAGCAGAGTGGAACTGGAGTTTTCAACTGGCAACGAACGACC

NdeI Gibson

Buffer DNA

Primer_6

Tag_3

CGTCACTCCTTTTCAATGTAACCTATTGCTTGGCTGGCGTTGAAATGTTGAGAGAGAAATGATCTTGTCTTGGT

GCAGTCAGGAAAAGTTACATTGAGTAACGAACGACCGCAACTTTACAACCTCTCTTACATAGAACGAACGA

Tag_3

Gap_1

Tag_3

Gap_2

Tag_3

GGCGTAATGAGAGTACATCAACATAGTTTGGTTGCTGGCGTGTGTTGTTCAACTAAGTAAAGACTTTGCTTG

CCGCATTACTCTCATGTAGTTGTATCAAACGAACGACCGCACAAAGTTGATTTCATTCTGAAACGAAC

Tag_3

Gap_3

Tag_3

Gap_4

Tag_3

CTGGCGTTGAGTTGATGTACATACTATCATTGCTTGGCTGGCGTGTCAAACAACATAATCATCTCATTGCT

GACCGCAACTCAACTACATGTATGATAGTAACGAACGACCGCACAGTTGTTGATTAGTAGAGTAAACGA

Tag_3

Gap_5

Tag_3

Gap_6

Tag_3

HincII

TSCTGGCGTCTATGAGTAATGACATCATTCATATGATAGGTAGACCCCTATGAGTTAGTCTACCTATGA

ACGACCGCAGGATACTCATTACTGTAGTAAGTATACTATCCATCTGSSGATACTCAATCAGATGGATACT

Tag_3

Gap_7

NBR_7

NBR_8

GATCTCTCATACCTTTGTCTATCTATATATACAATAGATACCTCTACCTTATGTGATTAACTTAACTACC

CTAGAGAGTATGGAACAGATAGATATATATGTTATCTATGGAGATGGGAATACAGTAATTGGAAATCATGG

NBR_8

NBR_9

Primer_7

End (467)

ACCTATGACCACTCACCAGTCTGAGGCGCTGCATGCAAGCTTGGCGTA

TSGATACTGGTGAAGTGGTCAGACTCCGGACGTACGTTTGAACCGCAT

3'

467

5'

Primer_7

Buffer

PstI Gibson

Figure 13 continued

tag 3_eigth (SEQ ID NO: 30)

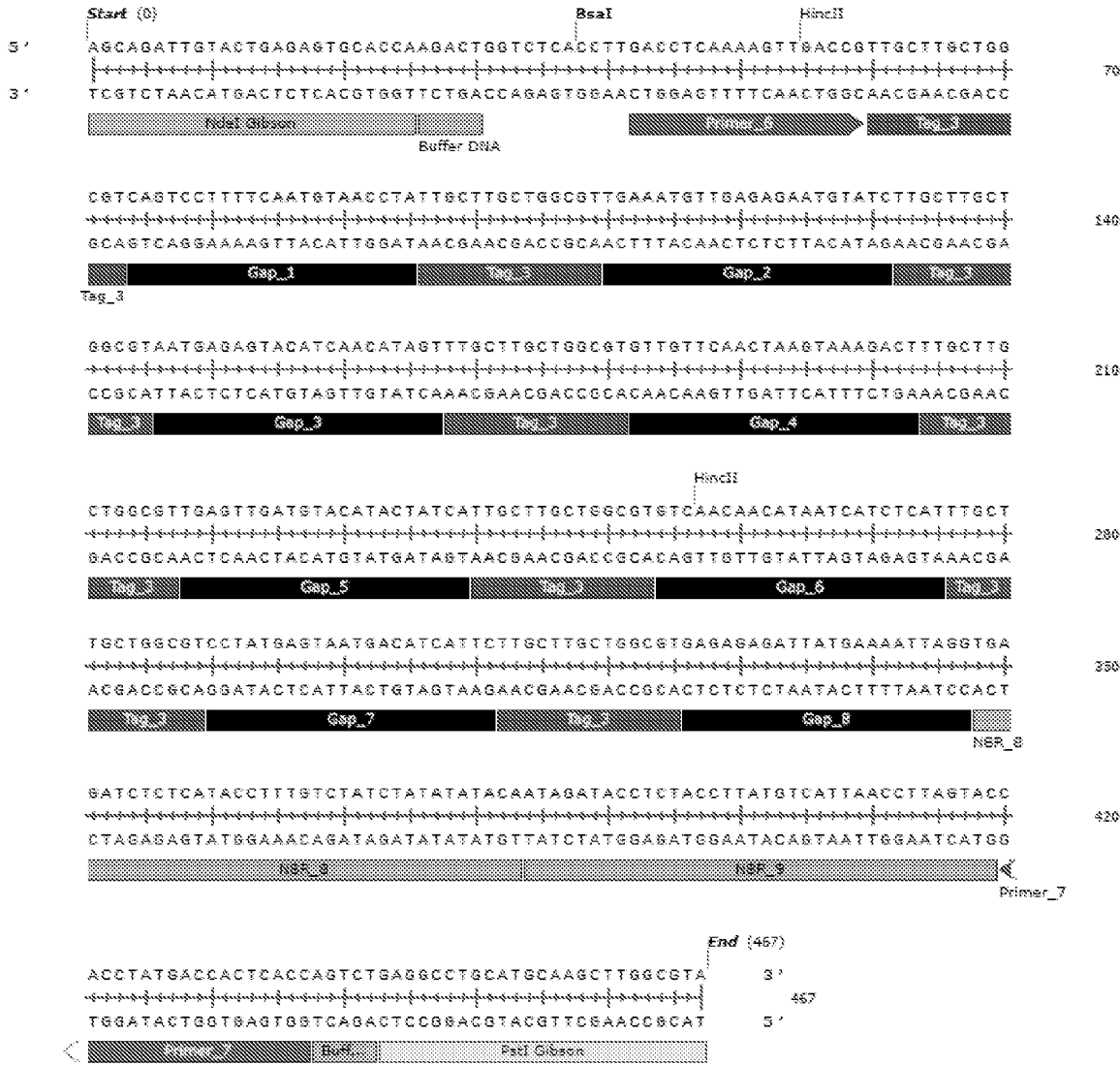


Figure 13 continued

tag 3_ninth (SEQ ID NO: 31)

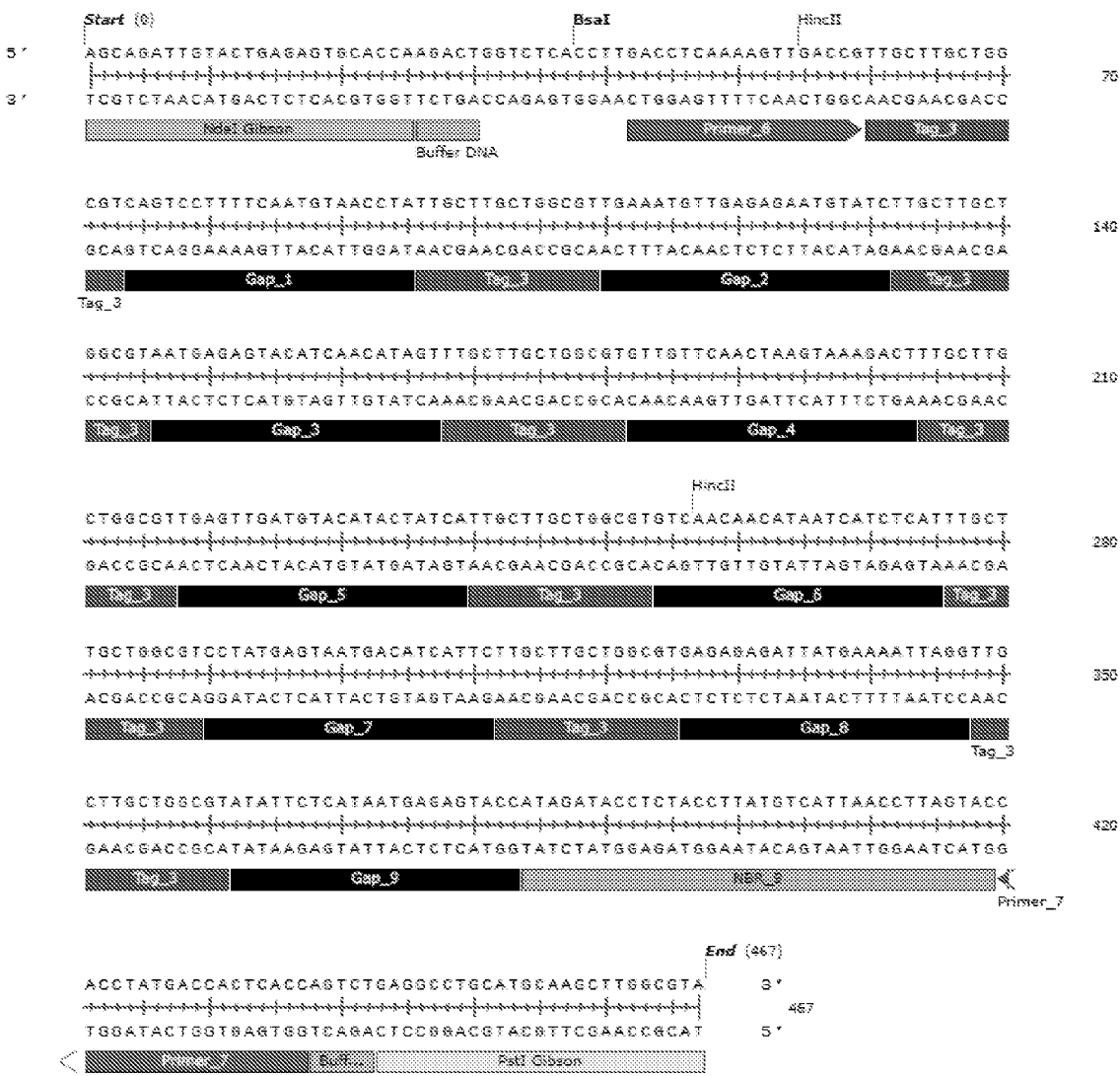


Figure 13 continued

tag 3_tenth (SEQ ID NO: 32)

