backbone

CTGCGCTCGGTCGTTCGGCTGCGGCGAGCGGTATCAGCTCACTCAAAGGCGGTAATACGGTTATCCACAGAATCAGGGGA

origin of replication

backbone

TAACGCAGGAAAGAACATGTGAGCAAAAGGCCAGCAAAAGGCCAGGAACCGTAAAAAGGCCGCGTTGCTGGCGTTTTTCC

backbone

origin of replication

ATAGGCTCCGCCCCCCTGACGAGCATCACAAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGA

backbone

origin of replication

TACCAGGCGTTTCCCCCTGGAAGCTCCCTCGTGCGCTCTCCTGTTCCGACCCTGCCGCTTACCGGATACCTGTCCGCCTT

backbone

origin of replication

TCTCCCTTCGGGAAGCGTGGCGCTTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCGGTGTAGGTCGTTCGCTCCAAGC

backbone

origin of replication

TGGGCTGTGTGCACGAACCCCCCGTTCAGCCCGACCGCTGCGCCTTATCCGGTAACTATCGTCTTGAGTCCAACCCGGTA

backbone

origin of replication

AGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGAGTT

backbone

origin of replication

CTTGAAGTGGTGGGCTAACTACGGCTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCG

backbone

origin of replication

GAAAAAGAGTTGGTAGCTCTTGATCCGGCAAACAAACCACCGCTGGTAGCGGTGGTTTTTTTTGTTTGCAAGCAGCAGATT

origin of replication

backbone

ACGCGCAGAAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGGTCTGACGCTCAGTGGAACGACGCGCGCGT

chloramphenicol
resistance marker

backbone

AACTCACGTTAAGGGATTTTGGTCATGAGCTTGCGCCGTCCCGTCAAGTCAGCGTATTTTCGAGACGTTACGCCCCGCCC

800 808 816 824 832 840 848 856 864 872 880

backbone

chloramphenicol resistance marker

TGCCACTCATCGCAGTACTGTTGTAATTCATTAAGCATTCTGCCGACATGGAAGCCATCACAAACGGCATGATGAACCTG

880 888 896 904 912 920 928 936 944 952 960

backbone

chloramphenicol resistance marker

AATCGCCAGCGGCATCAGCACCTTGTCGCCTTGCGTATAATATTTGCCCATGGTGAAAACGGGGGCGAAGAAGTTGTCCA

960 968 976 984 992 1,000 1,008 1,016 1,024 1,032 1,040

backbone

chloramphenicol resistance marker

TATTGGCCACGTTTAAATCAAAACTGGTGAAACTCACCCAGGGATTGGCTGACACGAAAAACATATTCTCAATAAATCCT

1,040 1,048 1,056 1,064 1,072 1,080 1,088 1,096 1,104 1,112 1,120

backbone

chloramphenicol resistance marker

TTAGGGAAATAGGCCAGGTTTTCACCGTAACACGCCACATCTTGCGAATATATGTGTAGAAACTGCCGGAAATCGTCGTG

1,120 1,128 1,136 1,144 1,152 1,160 1,168 1,176 1,184 1,192 1,200

backbone

chloramphenicol resistance marker

GTATTCACTCCAGAGCGATGAAAACGTTTCAGTTTGCTCATGGAAAACGGTGTAACATGGGTGAACACTATCCCATATCA

1,200 1,208 1,216 1,224 1,232 1,240 1,248 1,256 1,264 1,272 1,280

backbone

chloramphenicol resistance marker

CCAGCTCACCGTCTTTCATTGCCATACGGAATTCTGGATGAGCATTCATCAGGCGGGCAAGAATGTGAATAAAGGCCGGA

1,280 1,288 1,296 1,304 1,312 1,320 1,328 1,336 1,344 1,352 1,360

backbone

chloramphenicol resistance marker

TAAAACTTGTGCTTATTTTTCTTTACGGTTTTTAAAAAGGCCGTAATATCCAGCTGAACGGTCTGGTTATAGGTACATTG

1,360 1,368 1,376 1,384 1,392 1,400 1,408 1,416 1,424 1,432 1,440

backbone

chloramphenicol resistance marker

AGCAACTGACTGAAATGCCTCAAAATGTTCTTTACGATGCCATTGGGATATATCAACGGTGGTATATCCAGTGATTTTTT

1,440 1,448 1,456 1,464 1,472 1,480 1,488 1,496 1,504 1,512 1,520

chloramphenicol
resistance marker

backbone

TCTCCATATTCTTCCTTTTTCAATATTATTGAAGCATTTATCAGGGTTATTGTCTCATGAGCGGATACATATTTGAATGT

1,520 1,528 1,536 1,544 1,552 1,560 1,568 1,576 1,584 1,592 1,600

backbone

ATTTAGAAAAATAAACAAATAGGGGTCAGTGTTACAACCAATTAACCAATTCTGATGCGCGTCTCTCCCCTTTGCCTGGC

1,600 1,608 1,616 1,624 1,632 1,640 1,648 1,656 1,664 1,672 1,680

backbone

GGCAGTAGCGCGGTGGTCCCACCTGACCCCATGCCGAACTCAGAAGTGAAACGCCGTAGCGCCGATGGTAGTGTGGGGAC

1,680 1,688 1,696 1,704 1,712 1,720 1,728 1,736 1,744 1,752 1,760

backbone

TCCCCATGCGAGAGTAGGGAACTGCCAGGCATCAAATAAAACGAAAGGCTCAGTCGAAAGACTGGGCCTTTCGCCCGGGC

1,760 1,768 1,776 1,784 1,792 1,800 1,808 1,816 1,824 1,832 1,840

piggyBac

TAATTAGGGGGTGTCGCCCTTATTCGACTCTATAGTGAAGTTCCTATTCTCTAGAAAGTATAGGAACTTCTGAAGTGGGG

1,840 1,848 1,856 1,864 1,872 1,880 1,888 1,896 1,904 1,912 1,920

piggyBac

TATTCACGACAGCAGGCTGAATAATAAAAAAATTAGAAACTATTATTTAACCCTAGAAAGATAATCATATTGTGACGTAC

1,920 1,928 1,936 1,944 1,952 1,960 1,968 1,976 1,984 1,992 2,000

piggyBac

GTTAAAGATAATCATGCGTAAAATTGACGCATGTGTTTTATCGGTCTGTATATCGAGGTTTATTTATTAATTTGAATAGA

2,000 2,008 2,016 2,024 2,032 2,040 2,048 2,056 2,064 2,072 2,080

piggyBac

TATTAAGTTTTATTATATTTACACTTACATACTAATAATAAATTCAACAAACAATTTATTTATGTTTATTTATTTATTAA

2,080 2,088 2,096 2,104 2,112 2,120 2,128 2,136 2,144 2,152 2,160

piggyBac

AAAAAAACAAAAACTCAAAATTTCTTCTATAAAGTAACAAAACTTTTAAACATTCTCTCTTTTACAAAAATAAACTTATT

2,160 2,168 2,176 2,184 2,192 2,200 2,208 2,216 2,224 2,232 2,240

piggyBac

TTGTACTTTAAAAACAGTCATGTTGTATTATAAAATAAGTAATTAGCTTAACTTATACATAATAGAAACAAATTATACTT

2,240 2,248 2,256 2,264 2,272 2,280 2,288 2,296 2,304 2,312 2,320

piggyBac

ATTAGTCAGTCAGAAACAACTTTGGCACATATCAATATTATGCTCTCGACAAATAACTTTTTTGCATTTTTTGCACGATG

2,320 2,328 2,336 2,344 2,352 2,360 2,368 2,376 2,384 2,392 2,400

piggyBac

CATTTGCCTTTCGCCTTATTTTAGAGGGGCAGTAAGTACAGTAAGTACGTTTTTTTCATTACTGGCTCTTCAGTACTGTCA

2,400 2,408 2,416 2,424 2,432 2,440 2,448 2,456 2,464 2,472 2,480

piggyBac

TCTGATGTACCAGGCACTTCATTTGGCAAAATATTAGAGATATTATCGCGCAAATATCTCTTCAAAGTAGGAGCTTCTAA

2,480 2,488 2,496 2,504 2,512 2,520 2,528 2,536 2,544 2,552 2,560

piggyBac

ACGCTTACGCATAAACGATGACGTCAGGCTCATGTAAAGGTTTCTCATAAATTTTTTGCGACTTTGAACCTTTTCTCCCT

2,560 2,568 2,576 2,584 2,592 2,600 2,608 2,616 2,624 2,632 2,640

piggyBac

TGCTACTGACATTATGGCTGTATATAATAAAAGAATTTATGCAGGCAATGTTTATCATTCCGTACAATAATGCCATAGGC

2,640 2,648 2,656 2,664 2,672 2,680 2,688 2,696 2,704 2,712 2,720

piggyBac | AttB

CACCTATTCGTCTTCCTACTGCAGGTGCGGGTGCCAGGGCGTGCCCTTGGGCTCCCCGGGCGCGTACTCCACCTCACCCA

2,720 2,728 2,736 2,744 2,752 2,760 2,768 2,776 2,784 2,792 2,800

AttB

SV40

TGCGATCGCTCCGGAAAGATACATTGATGAGTTTGGACAAACCACAACTAGAATGCAGTGAAAAAAATGCTTTATTTGTG

2,800 2,808 2,816 2,824 2,832 2,840 2,848 2,856 2,864 2,872 2,880

SV40

AAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAACAAGTTAACAACAACAATTGCATTCATTTT

2,880 2,888 2,896 2,904 2,912 2,920 2,928 2,936 2,944 2,952 2,960

SV40

ATGTTTCAGGTTCAGGGGGAGGTGTGGGAGGTTTTTTAAAGCAAGTAAAACCTCTACAAATGTGGTATGGCTGATTATGA

2,960 2,968 2,976 2,984 2,992 3,000 3,008 3,016 3,024 3,032 3,040

SV40

DsRed

TCTAGAGTCGCGGCCGCTACAGGAACAGGTGGTGGCGGCCCTCGGTGCGCTCGTACTGCTCCACGATGGTGTAGTCCTCG

3,040 3,048 3,056 3,064 3,072 3,080 3,088 3,096 3,104 3,112 3,120

DsRed

TTGTGGGAGGTGATGTCCAGCTTGGAGTCCACGTAGTAGTAGCCGGGCAGCTGCACGGGCTTCTTGGCCATGTAGATGGA

3,120 3,128 3,136 3,144 3,152 3,160 3,168 3,176 3,184 3,192 3,200

DsRed

CTTGAACTCCACCAGGTAGTGGCCGCCGTCCTTCAGCTTCAGGGCCTTGTGGATCTCGCCCTTCAGCACGCCGTCGCGGG

3,200 3,208 3,216 3,224 3,232 3,240 3,248 3,256 3,264 3,272 3,280

DsRed

GGTACAGGCGCTCGGTGGAGGCCTCCCAGCCCATGGTCTTCTTCTGCATTACGGGGCCGTCGGAGGGGAAGTTCACGCCG

3,280 3,288 3,296 3,304 3,312 3,320 3,328 3,336 3,344 3,352 3,360

DsRed

ATGAACTTCACCTTGTAGATGAAGCAGCCGTCCTGCAGGGAGGAGTCTTGGGTCACGGTCACCACGCCGCCGTCCTCGAA

3,360 3,368 3,376 3,384 3,392 3,400 3,408 3,416 3,424 3,432 3,440

DsRed

GTTCATCACGCGCTCCCACTTGAAGCCCTCGGGGAAGGACAGCTTCTTGTAGTCGGGGATGTCGGCGGGGTGCTTCACGT

3,440 3,448 3,456 3,464 3,472 3,480 3,488 3,496 3,504 3,512 3,520

DsRed

ACACCTTGGAGCCGTACTGGAACTGGGGGGACAGGATGTCCCAGGCGAAGGGCAGGGGGCCGCCCTTGGTCACCTTCAGC

3,520 3,528 3,536 3,544 3,552 3,560 3,568 3,576 3,584 3,592 3,600

DsRed

TTCACGGTGTTGTGGCCCTCGTAGGGGCGGCCCTCGCCCTCGCCCTCGATCTCGAACTCGTGGCCGTTCACGGTGCCCTC

3,600 3,608 3,616 3,624 3,632 3,640 3,648 3,656 3,664 3,672 3,680

DsRed

CATGCGCACCTTGAAGCGCATGAACTCCTTGATGACGTTCTTGGAGGAGCGCACCATGGTGGCGACCTGTGGATCCCGTC

3,680 3,688 3,696 3,704 3,712 3,720 3,728 3,736 3,744 3,752 3,760

3xP3

CCGGGCCCGCGGTACCGTCGACTCTAGCGGTACCCCGATTGTTTAGCTTGTTCAGCTGCGCTTGTTTATTTGCTTAGCTT

3,760 3,768 3,776 3,784 3,792 3,800 3,808 3,816 3,824 3,832 3,840

3xP3

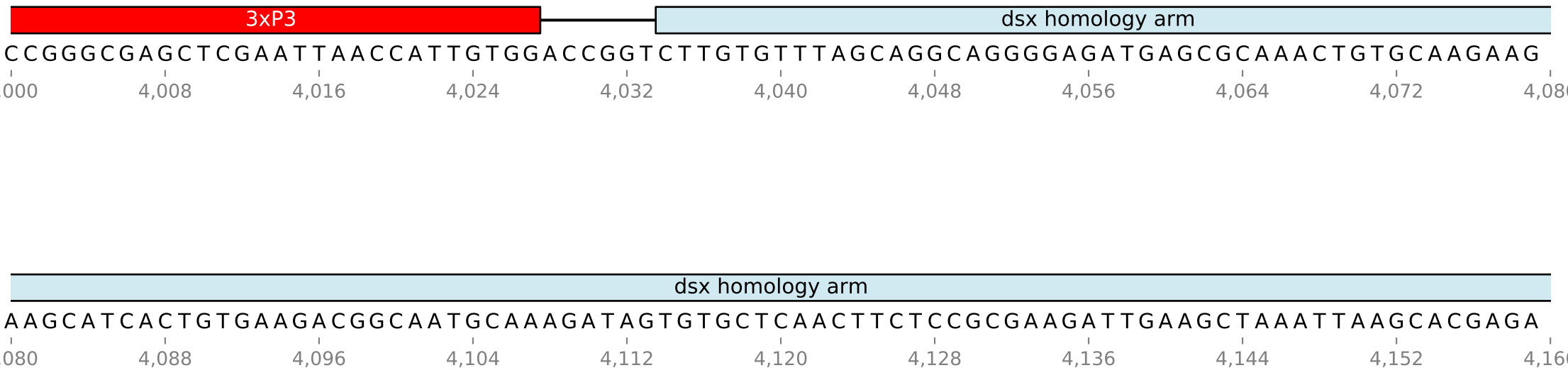
TCGCTTAGCGACGTGTTCACTTTGCTTGTTTGAATTGAATTGTCGCTCCGTAGACGAAGCGCCTCTATTTATACTCCGGC

3,840 3,848 3,856 3,864 3,872 3,880 3,888 3,896 3,904 3,912 3,920

3xP3

GGTCGAGGGTTCGAAATCGATAAGCTTGGATCCTAATTGAATTAGCTCTAATTGAATTAGTCTCTAATTGAATTAGATCC

3,920 3,928 3,936 3,944 3,952 3,960 3,968 3,976 3,984 3,992 4,000


3xP3
dsx homology arm
CCGGGCGAGCTCGAATTAACCATTGTGGACCGGTCTTGTGTTTAGCAGGCAGGGGAGATGAGCGCAAACTGTGCAAGAAG
4,000
4,008
4,016
4,024
4,032
4,040
4,048
4,056
4,064
4,072
4,080
dsx homology arm
AAGCATCACTGTGAAGACGGCAATGCAAAGATAGTGTGCTCAACTTCTCCGCGAAGATTGAAGCTAAATTAAGCACGAGA
4,080
4,088
4,096
4,104
4,112
4,120
4,128
4,136
4,144
4,152
4,160
dsx homology arm
TTAGCATGACTGAAGTGACTTTTCAAAGTGTCAGAATGGCTGCACTCGCAAACTAGCTGGATGCAGCGCAATTTTGCCCC
4,160
4,168
4,176
4,184
4,192
4,200
4,208
4,216
4,224
4,232
4,240
dsx homology arm
GGTGTGTGCGCGCATGCAAACGAGCAACCGCAGAGGGCAAAGGAGAGGATGGGAAGGAGGGAGGGAGTGAAAGAGCAGGC
4,240
4,248
4,256
4,264
4,272
4,280
4,288
4,296
4,304
4,312
4,320
dsx homology arm
TTAAGGTTGCCCTCGGGCATTGAAGTCGATACAGCGGTTCTATTCCAGTGCCAGTAACGATGACGAAGACGATGTTGCTT
4,320
4,328
4,336
4,344
4,352
4,360
4,368
4,376
4,384
4,392
4,400
dsx homology arm
CTGCTGCTGTTGCTGCTGTTGTTGTTGATGATGATGATGATAATAGTGCAAATATAAAATAAATCTTCCGTAAGCTTTGT
4,400
4,408
4,416
4,424
4,432
4,440
4,448
4,456
4,464
4,472
4,480
dsx homology arm
GTAGTGGTGCGTGGCTACTATAAGCCCGTCTGGAAGCAAGGAAGCTAGTCGGGCAGGGTCATGCAAAAGGGAGACACCTT
4,480
4,488
4,496
4,504
4,512
4,520
4,528
4,536
4,544
4,552
4,560
dsx homology arm
CGGAGCTCCGGAGCTCCCGCCGGCACTCTCGGGGGGACGTCCGTTATGCGTTGTGATTTATTATGGAATATTTATTATAG
4,560
4,568
4,576
4,584
4,592
4,600
4,608
4,616
4,624
4,632
4,640
dsx homology arm
TGTCTTGTTTTGAAAAAATAACTTCAACGGTTCGAATTTCCTACACCTCGAGATCGGGGCTGGAGTGGCAACGTGGTACG
4,640
4,648
4,656
4,664
4,672
4,680
4,688
4,696
4,704
4,712
4,720
dsx homology arm
GAACGGTACAGCGGTTTGAGCCGTTCGGTCTTGGGACTCACGGATCGCAGAATGTTATTGTGCGCGCACTGATGGGAAAG
4,720
4,728
4,736
4,744
4,752
4,760
4,768
4,776
4,784
4,792
4,800

dsx homology arm

TCATTTTTCACCGAGTGGTCAGGGCGCGTAGTCCAGTTCGTTTCTGGCTGCTGTTGCTGATGCTACGATCCTCAGGAATG

4,800 4,808 4,816 4,824 4,832 4,840 4,848 4,856 4,864 4,872 4,880

dsx homology arm

ATTGGAAACGCCTGGAGATGGTGGGAAAAAATCAAACACAAAAACGATCCTAATGAACATCGTGTGTTCTCATTCGCTGC

4,880 4,888 4,896 4,904 4,912 4,920 4,928 4,936 4,944 4,952 4,960

dsx homology arm

CACGATTGACACCTTCGATAAGACGCACATAATGAGCTAAAGGAGAGGGGACAGGGTCTTGTCTTTGCCACGAGCGATAA

4,960 4,968 4,976 4,984 4,992 5,000 5,008 5,016 5,024 5,032 5,040

dsx homology arm

GATTGCAATCACTCGTGAGCGTGTGCTGCTGGGCTGAAGAAGAAACGCTTTCCACAGCAGTAGGTGGGAAGTGGGATTGT

5,040 5,048 5,056 5,064 5,072 5,080 5,088 5,096 5,104 5,112 5,120

dsx homology arm

GGAACGTGGCATTGAAAAGAACCTATTTTCTAAAGCCCGAGAGCCCGTTCTCGAACTGGAAAACCAGATGCAGAAGTTTT

5,120 5,128 5,136 5,144 5,152 5,160 5,168 5,176 5,184 5,192 5,200

dsx homology arm

TTATTGTCCCCCGCCAGGAAAACAAATGTATTTAATGCTTTCTTTGCCTTTTCCGCCCCGTTTCAGACGACGAGCTAGTG

5,200 5,208 5,216 5,224 5,232 5,240 5,248 5,256 5,264 5,272 5,280

dsx homology arm

AAGCGAGCCCAATGGCTGTTGGAGAAACTCGGCTACCCGTGGGAGATGATGCCCCTGATGTACGTCATACTAAAGAGCGC

5,280 5,288 5,296 5,304 5,312 5,320 5,328 5,336 5,344 5,352 5,360

dsx homology arm

CGATGGCGATGTACAAAAAGCACACCAGCGGATCGACGAAGGTAAGCTGGCGATGATGGTGTCGTTCGACATCACTTTCA

5,360 5,368 5,376 5,384 5,392 5,400 5,408 5,416 5,424 5,432 5,440

dsx homology arm

TCACCGTGTCAGACATCTACTGTGCCTAGCACCGGGTCCAGTGGTCACAGGGTGTAGCAAAAACGTGTTCTTTTTTGCGA

5,440 5,448 5,456 5,464 5,472 5,480 5,488 5,496 5,504 5,512 5,520

dsx homology arm

GAGACTCTACCTCATGATGCAGCTGTTAAGGAAAGGTTTCAGATGAAGGCAATTTTTCCTAGGATAAGATGATCTTAAGT

5,520 5,528 5,536 5,544 5,552 5,560 5,568 5,576 5,584 5,592 5,600

dsx homology arm

TACCTGCGTATTAGTGTTTAACATTGTCGTCTCAACTCCCAAGAATGTTTTAATCGTCTAGGGCTAGTTTATTTATACTG

5,600 5,608 5,616 5,624 5,632 5,640 5,648 5,656 5,664 5,672 5,680

dsx homology arm

TTCTCATTGAAATGTCGTTCAATCCAACATGTTAAGTTAGCTAGCTCAGACACGAGAAGTTAGGAGTATCTGCATCTTGA

5,680 5,688 5,696 5,704 5,712 5,720 5,728 5,736 5,744 5,752 5,760

dsx homology arm

AGGTAGCGGCATATGGTGTTATGCCACGTTCACTGACTTCAAAATTCGATACAAAAAAAAAACCAAAACATCAAAAACCA

5,760 5,768 5,776 5,784 5,792 5,800 5,808 5,816 5,824 5,832 5,840

dsx homology arm

AATTGTGAATTCCGTCAGCCAGCAGCAGTGACCTTCAAAGCCTTACCTTTCCATTCATTTATGTTTAACACAGGTCAAGG

5,840 5,848 5,856 5,864 5,872 5,880 5,888 5,896 5,904 5,912 5,920

TAACGGATACGTTAACTGTCTTGGTGGTGAGGATGAGTCGGGCTGTGGGATGGATCAGATGCTACGATCGATGTCGCAGC

5,920 5,928 5,936 5,944 5,952 5,960 5,968 5,976 5,984 5,992 6,000

AttP

GAGGTGAGGAAGAAACAACTTTATTATACAAAGTTGTGGCGCGCCCCCCAACTGGGGTAACCTTTGAGTTCTCTCAGTTG

6,000 6,008 6,016 6,024 6,032 6,040 6,048 6,056 6,064 6,072 6,080

AttP

SV40

GGGGTTAATTAAAAGATACATTGATGAGTTTGGACAAACCACAACTAGAATGCAGTGAAAAAAATGCTTTATTTGTGAAA

6,080 6,088 6,096 6,104 6,112 6,120 6,128 6,136 6,144 6,152 6,160

SV40

TTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAACAAGTTAACAACAACAATTGCATTCATTTTATG

6,160 6,168 6,176 6,184 6,192 6,200 6,208 6,216 6,224 6,232 6,240

SV40

TTTCAGGTTCAGGGGGAGGTGTGGGAGGTTTTTTAAAGCAAGTAAAACCTCTACAAATGTGGTATGGCTGATTATGATCT

6,240 6,248 6,256 6,264 6,272 6,280 6,288 6,296 6,304 6,312 6,320

SV40

GFP

AGAGTCGCGGCCGCTTTACTTGTACAGCTCGTCCATGCCGAGAGTGATCCCGGCGGCGGTCACGAACTCCAGCAGGACCA

6,320 6,328 6,336 6,344 6,352 6,360 6,368 6,376 6,384 6,392 6,400

GFP

TGTGATCGCGCTTCTCGTTGGGGTCTTTGCTCAGGGCGGACTGGGTGCTCAGGTAGTGGTTGTCGGGCAGCAGCACGGGG

6,400 6,408 6,416 6,424 6,432 6,440 6,448 6,456 6,464 6,472 6,480

GFP

CCGTCGCCGATGGGGGTGTTCTGCTGGTAGTGGTCGGCGAGCTGCACGCTGCCGTCCTCGATGTTGTGGCGGATCTTGAA

6,480 6,488 6,496 6,504 6,512 6,520 6,528 6,536 6,544 6,552 6,560

GFP

GTTCACCTTGATGCCGTTCTTCTGCTTGTCGGCCATGATATAGACGTTGTGGCTGTTGTAGTTGTACTCCAGCTTGTGCC

6,560 6,568 6,576 6,584 6,592 6,600 6,608 6,616 6,624 6,632 6,640

GFP

CCAGGATGTTGCCGTCCTCCTTGAAGTCGATGCCCTTCAGCTCGATGCGGTTCACCAGGGTGTCGCCCTCGAACTTCACC

6,640 6,648 6,656 6,664 6,672 6,680 6,688 6,696 6,704 6,712 6,720

GFP

TCGGCGCGGGTCTTGTAGTTGCCGTCGTCCTTGAAGAAGATGGTGCGCTCCTGGACGTAGCCTTCGGGCATGGCGGACTT

6,720 6,728 6,736 6,744 6,752 6,760 6,768 6,776 6,784 6,792 6,800

GFP

GAAGAAGTCGTGCTGCTTCATGTGGTCGGGGTAGCGGCTGAAGCACTGCACGCCGTAGGTCAGGGTGGTCACGAGGGTGG

6,800 6,808 6,816 6,824 6,832 6,840 6,848 6,856 6,864 6,872 6,880

GFP

GCCAGGGCACGGGCAGCTTGCCGGTGGTGCAGATGAACTTCAGGGTCAGCTTGCCGTAGGTGGCATCGCCCTCGCCCTCG

6,880 6,888 6,896 6,904 6,912 6,920 6,928 6,936 6,944 6,952 6,960

GFP

CCGGACACGCTGAACTTGTGGCCGTTTACGTCGCCGTCCAGCTCGACCAGGATGGGCACCACCCCGGTGAACAGCTCCTC

6,960 6,968 6,976 6,984 6,992 7,000 7,008 7,016 7,024 7,032 7,040

GFP 3xP3

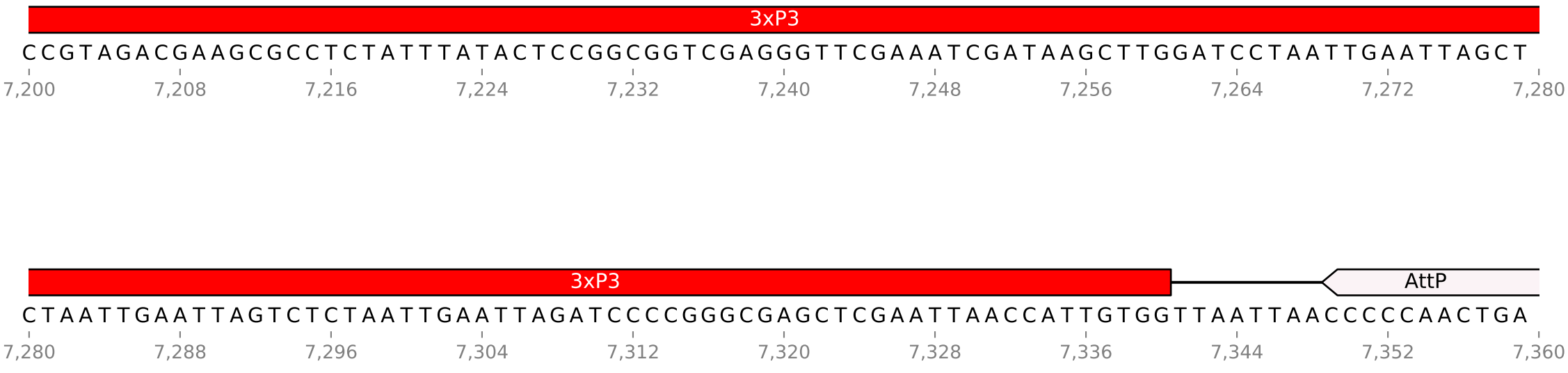
GCCCTTGCTCACCATGGTGGCGACCGGTGGATCCCGGGCCCGCGGTACCGTCGACTCTAGCGGTACCCCGATTGTTTAGC

7,040 7,048 7,056 7,064 7,072 7,080 7,088 7,096 7,104 7,112 7,120

3xP3

TTGTTCAGCTGCGCTTGTTTATTTGCTTAGCTTTCGCTTAGCGACGTGTTCACTTTGCTTGTTTGAATTGAATTGTCGCT

7,120 7,128 7,136 7,144 7,152 7,160 7,168 7,176 7,184 7,192 7,200


3xP3
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7,208
7,216
7,224
7,232
7,240
7,248
7,256
7,264
7,272
7,280
3xP3
AttP
CTAATTGAATTAGTCTCTAATTGAATTAGATCCCCGGGCGAGCTCGAATTAACCATTGTGGTTAATTAACCCCCAACTGA
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7,296
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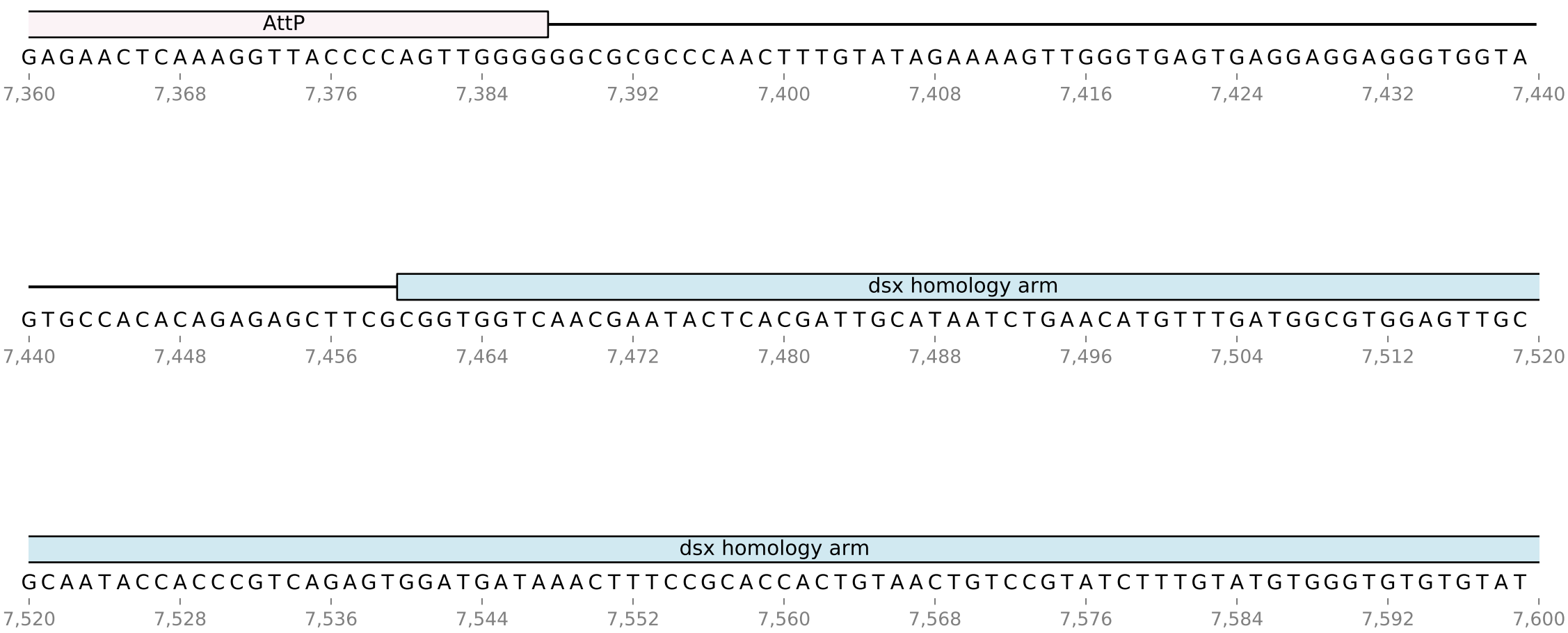
7,344
7,352
7,360


AttP
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7,368
7,376
7,384
7,392
7,400
7,408
7,416
7,424
7,432
7,440
dsx homology arm
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7,440
7,448
7,456
7,464
7,472
7,480
7,488
7,496
7,504
7,512
7,520
dsx homology arm
GCAATACCACCCGTCAGAGTGGATGATAAACTTTCCGCACCACTGTAACTGTCCGTATCTTTGTATGTGGGTGTGTGTAT
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7,592
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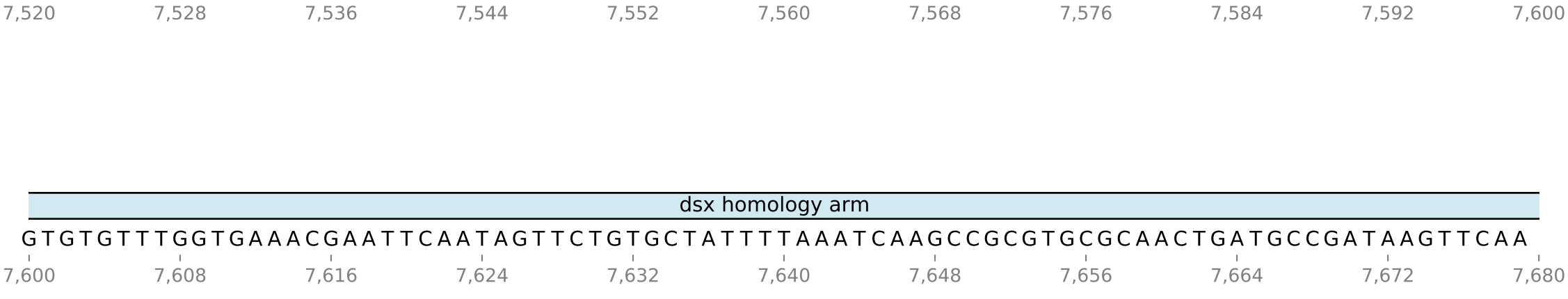
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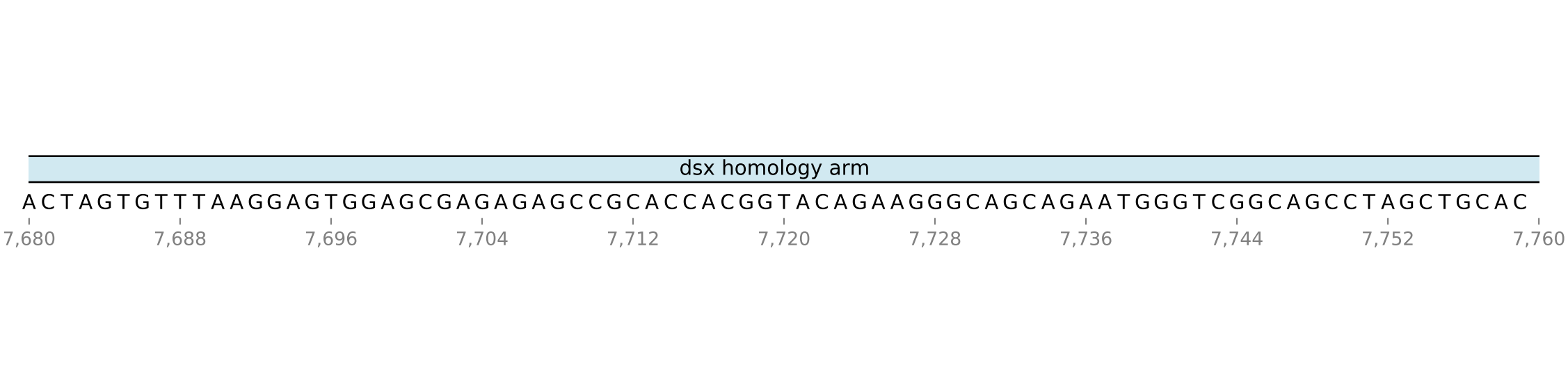
7,600
7,608
7,616
7,624
7,632
7,640
7,648
7,656
7,664
7,672
7,680
dsx homology arm
ACTAGTGTTTAAGGAGTGGAGCGAGAGAGCCGCACCACGGTACAGAAGGGCAGCAGAATGGGTCGGCAGCCTAGCTGCAC
7,680
7,688
7,696
7,704
7,712
7,720
7,728
7,736
7,744
7,752
7,760


dsx homology arm
TGGTGCGGTGCGTCCGGCGTCTCGGGGGGAGGGCGAGGAAATTCTAGTGTTAAATCGGAGCAGCAAAAACAAAACAGTGG
7,760
7,768
7,776
7,784
7,792
7,800
7,808
7,816
7,824
7,832
7,840
dsx homology arm
TCGTCCCGTTCAAGAAACGGCCTGTACACACACACAGAAAACACTGCAGCATGTTTGTACATAGTAGATCCTAGAGCAGG
7,840
7,848
7,856
7,864
7,872
7,880
7,888
7,896
7,904
7,912
7,920
dsx homology arm
TGGTCGTTGCTCCTCGAACGCTCTGGACGCACGGCTTCGCGCGTATTTGCGTAGCGTTCCGCCGATCGTGGGTATTCGTA
7,920
7,928
7,936
7,944
7,952
7,960
7,968
7,976
7,984
7,992
8,000

dsx homology arm

CTGCCACAAGCCCGCTTTCTCCCATGCAATCTCTGCAACCAAACCAACAAACAACAACAAAAAACCAATCGACAAAATGA

8,000 8,008 8,016 8,024 8,032 8,040 8,048 8,056 8,064 8,072 8,080

dsx homology arm

ATCACACCCCTTTTGTATCATCTGTATATTCTTGTTCTTTGCGTTCTTTTCTATGTGGCCCACGCCCCGGCGGGTACGTA

8,080 8,088 8,096 8,104 8,112 8,120 8,128 8,136 8,144 8,152 8,160

dsx homology arm

ATTGCGTCGAAAACCCCGAAAACCCCGGCACATACAGTGTACATACGGTTTGAGGACAACTTTGACCTGCAGCCCTTCTG

8,160 8,168 8,176 8,184 8,192 8,200 8,208 8,216 8,224 8,232 8,240

dsx homology arm

GGGTTGCCACGTGTAGCTATACTTGTGAGATCGGGCGCCGACGGTGTAAAGCGCGAATGGCCGCCACACAGTGTGTCCAC

8,240 8,248 8,256 8,264 8,272 8,280 8,288 8,296 8,304 8,312 8,320

dsx homology arm

TCCAACACTACCCCTCTGGAACTACCCCGTCCAGGGATGCACCGGCTCGGCTCATGCCCCTGCAAAACAGTCCGGGCTCC

8,320 8,328 8,336 8,344 8,352 8,360 8,368 8,376 8,384 8,392 8,400

dsx homology arm

ACTGTAGTAGCTCCGGCGTTGCTCTGAGAGAAGGATGCCCTTCGAAGTGTCGAAAGCGTGCATTGGGCGTTCAAGTGTGT

8,400 8,408 8,416 8,424 8,432 8,440 8,448 8,456 8,464 8,472 8,480

dsx homology arm

GTGTGTGTGTTAGGTTTAGCGAGAAACAGCAGCAGTTGCGTGTGCTGAAAAGCGAAGGAGTAATAGAGTGCATAATGAAA

8,480 8,488 8,496 8,504 8,512 8,520 8,528 8,536 8,544 8,552 8,560

dsx homology arm

ATGAAAATGAAAATGAAGCAAAAGTAGAAGGCGGAGGAGAGCAACCTGTGTTCCACTAGTAGCGAATAGTTTAGTCTAGT

8,560 8,568 8,576 8,584 8,592 8,600 8,608 8,616 8,624 8,632 8,640

dsx homology arm

TTCGTCACCAATCAACCTTCCAACCATCGTTCAACCAATACCTGAGTCAACATCGTCATCGTTATCGTGCCACAACTTTA

8,640 8,648 8,656 8,664 8,672 8,680 8,688 8,696 8,704 8,712 8,720

dsx homology arm

TTAAAAATGAACCTTGTCCGCGCCACCGTAGGGTGATCTAAGGCGACCTTTCTTACGGGCGCGACCCACATGCCATCGTC

8,720 8,728 8,736 8,744 8,752 8,760 8,768 8,776 8,784 8,792 8,800

dsx homology arm

ACCTTCTCCAATCAAAACCAACAGCCTGTACCGATGGTGTGCAATTGTGCGTGCGTGTGTTATTAGCAAAAAAAGAGA

8,800 8,808 8,816 8,824 8,832 8,840 8,848 8,856 8,864 8,872 8,880

dsx homology arm

AAGAGTCGACGAGAGAGAGATAGATCGAGATCGAGAGTACAAAAGAGCAGTAGAAATGTTCGTTGTTTGTTTTTCGTAAC

8,880 8,888 8,896 8,904 8,912 8,920 8,928 8,936 8,944 8,952 8,960

dsx homology arm

ACAGTTGTTTAGCCAAAATGGGAATTTCCAATAATCCCGGGGGCGGGGAAATGCGGGAATACTGCGTACACACATACATC

8,960 8,968 8,976 8,984 8,992 9,000 9,008 9,016 9,024 9,032 9,040

dsx homology arm

AATCAAAAAGAAAAATCCTTGCGCTACATCACTACCGTTTGCGCGGTGCTGATCTAGAGCAGACCACTTTCCACTCCACT

9,040 9,048 9,056 9,064 9,072 9,080 9,088 9,096 9,104 9,112 9,120

dsx homology arm

CTACAATCAATCAATCTGTGCAGAAGGTATGGTAAGACGGCCTTTGAGCGAGTCACGGTCGCCACCATAACGCCGTCCGA

9,120 9,128 9,136 9,144 9,152 9,160 9,168 9,176 9,184 9,192 9,200

dsx homology arm

CGAGGGCTGAATGCGAACTTTGCTAATCGATTTTCCGCTTTCTTTTTATCCCACCTCCTTTTCTCTCCCTCTCTCTTT

9,200 9,208 9,216 9,224 9,232 9,240 9,248 9,256 9,264 9,272 9,280

dsx homology arm

TGCACTGCCCCTTGTAACCCCCAAAAAGGTAAACGACACATTAAGACCTACGAAGCGTTGGTGAAGTCATCGCTCGATCC

9,280 9,288 9,296 9,304 9,312 9,320 9,328 9,336 9,344 9,352 9,360

dsx homology arm AttB

GAACAGCGACCGGCTGACGGAGGACGACGACGAGGACGAGAACATCTCGGTGACCCGCACCACGCGTGGGTCCCATGGGT

9,360 9,368 9,376 9,384 9,392 9,400 9,408 9,416 9,424 9,432 9,440

AttB piggyBac

GAGGTGGAGTACGCGCCCGGGGAGCCCAAGGGCACGCCCTGGCACCCGCAGATCTCGGATCTGACAATGTTCAGTGCAGA

9,440 9,448 9,456 9,464 9,472 9,480 9,488 9,496 9,504 9,512 9,520

piggyBac

GACTCGGCTACGCCTCGTGGACTTTGAAGTTGACCAACAATGTTTATTCTTACCTCTAATAGTCCTCTGTGGCAAGGTCA

9,520 9,528 9,536 9,544 9,552 9,560 9,568 9,576 9,584 9,592 9,600

piggyBac

AGATTCTGTTAGAAGCCAATGAAGAACCTGGTTGTTCAATAACATTTTGTTCGTCTAATATTTCACTACCGCTTGACGTT

9,600 9,608 9,616 9,624 9,632 9,640 9,648 9,656 9,664 9,672 9,680

piggyBac

GGCTGCACTTCATGTACCTCATCTATAAACGCTTCTTCTGTATCGCTCTGGACGTCATCTTCACTTACGTGATCTGATAT

9,680 9,688 9,696 9,704 9,712 9,720 9,728 9,736 9,744 9,752 9,760

piggyBac

TTCACTGTCAGAATCCTCACCAACAAGCTCGTCATCGCTTTGCAGAAGAGCAGAGAGGATATGCTCATCGTCTAAAGAAC

9,760 9,768 9,776 9,784 9,792 9,800 9,808 9,816 9,824 9,832 9,840

piggyBac

TACCCATTTTATTATATATTAGTCACGATATCTATAACAAGAAAATATATATATAATAAGTTATCACGTAAGTAGAACAT

9,840 9,848 9,856 9,864 9,872 9,880 9,888 9,896 9,904 9,912 9,920

piggyBac

GAAATAACAATATAATTATCGTATGAGTTAAATCTTAAAAGTCACGTAAAAGATAATCATGCGTCATTTTGACTCACGCG

9,920 9,928 9,936 9,944 9,952 9,960 9,968 9,976 9,984 9,992 10,000

piggyBac

GTCGTTATAGTTCAAAATCAGTGACACTTACCGCATTGACAAGCACGCCTCACGGGAGCTCCAAGCGGCGACTGAGATGT

10,000 10,008 10,016 10,024 10,032 10,040 10,048 10,056 10,064 10,072 10,080

piggyBac

CCTAAATGCACAGCGACGGATTCGCGCTATTTAGAAAGAGAGAGCAATATTTCAAGAATGCATGCGTCAATTTTACGCAG

10,080 10,088 10,096 10,104 10,112 10,120 10,128 10,136 10,144 10,152 10,160

piggyBac

ACTATCTTTCTAGGGTTAAAAAAGATTTGCGAAAATGAAGTGAAGTTCCTATACTTTCTAGAGAATAGGAACTTCTATAG

10,160 10,168 10,176 10,184 10,192 10,200 10,208 10,216 10,224 10,232 10,240

TGAGTCGAATAAGGGCGACACAAAATTTATTCTAAATGCATAATAAATACTGATAACATCTTATAGTTTGTATTATATTT

10,240 10,248 10,256 10,264 10,272 10,280 10,288 10,296 10,304 10,312 10,320

TGTATTATCGTTGACATGTATAATTTTGATATCAAAAACTGATTTTCCCTTTATTATTTTCGAGATTTATTTTCTTAATT

10,320 10,328 10,336 10,344 10,352 10,360 10,368 10,376 10,384 10,392 10,400


CTCTTTAACAAACTAGAAATATTGTATATACAAAAAATCATAAATAATAGATGAATAGTTTAATTATAGGTGTTCATCAA
10,400
10,408
10,416
10,424
10,432
10,440
10,448
10,456
10,464
10,472
10,480


TCGAAAAAGCAACGTATCTTATTTAAAGTGCGTTGCTTTTTTCTCATTTATAAGGTTAAATAATTCTCATATATCAAGCA
10,480
10,488
10,496
10,504
10,512
10,520
10,528
10,536
10,544
10,552
10,560


AAGTGACAGGCGCCCTTAAATATTCTGACAAATGCTCTTTCCCTAAACTCCCCCCATAAAAAAACCCGCCGAAGCGGGTT
10,560
10,568
10,576
10,584
10,592
10,600
10,608
10,616
10,624
10,632
10,640


TTTACGTTATTTGCGGATTAACGATTACTCGTTATCAGAACCGCCCAGGGGGCCCGAGCTTAAGACTGGCCGTCGTTTTA
10,640
10,648
10,656
10,664
10,672
10,680
10,688
10,696
10,704
10,712
10,720


CAACACAGAAAGAGTTTGTAGAAACGCAAAAAGGCCATCCGTCAGGGGCCTTCTGCTTAGTTTGATGCCTGGCAGTTCCC
10,720
10,728
10,736
10,744
10,752
10,760
10,768
10,776
10,784
10,792
10,800


TACTCTCGCCTTCCGCTTCCTCGCTCACTGACTCG
10,800
10,808
10,816
10,824
10,832