

AseI
|
TAGTTATTAATAGTAATCAATTACGGGGTCATTAGTTTCATAGCCCATATATGGAGTTCGCGTTACATAA
ATCAATAATTATCATTAGTTAATGCCCCAGTAATCAAGTATCGGGTATATACCTCAAGGCGCAATGTATT
10 20 30 40 50 60 70

Bgl I AatII
| |
CTTACGGTAAATGGCCCGCCTGGCTGACCGCCCAACGACCCCGCCCATTGACGTCAATAATGACGTATG
GAATGCCATTTACCGGGCGGACCGACTGGCGGGTTGCTGGGGGCGGGTAACTGCAGTTATTACTGCATAC
80 90 100 110 120 130 140

AatII
|
TTCCCATAGTAACGCCAATAGGGACTTTCCATTGACGTCAATGGGTGGAGTATTTACGGTAACTGCCCA
AAGGGTATCATTGCGGTTATCCCTGAAAGGTAAGTGCAGTTACCCACCTCATAAATGCCATTTGACGGGT
150 160 170 180 190 200 210

Bgl I NdeI AatII
| | |
CTTGGCAGTACATCAAGTGTATCATATGCCAAGTACGCCCCCTATTGACGTCAATGACGGTAAATGGCC
GAACCGTCATGTAGTTCACATAGTATACGGTTCATGCGGGGGATAACTGCAGTTACTGCCATTTACCGGG
220 230 240 250 260 270 280

Bgl I SnaBI
| |
GCCTGGCATTATGCCCAGTACATGACCTTATGGGACTTTTCTACTTGGCAGTACATCTACGTATTAGTCA
CGGACCGTAATACGGGTCATGTACTGGAATACCCTGAAAGGATGAACCGTCATGTAGATGCATAATCAGT
290 300 310 320 330 340 350

NcoI
|
TCGCTATTACCATGGTGATGCGGTTTTGGCAGTACATCAATGGGCGTGGATAGCGGTTTGACTCACGGGG
AGCGATAATGGTACCACTACGCCAAAACCGTCATGTAGTTACCCGCACCTATCGCCAAACTGAGTGCCCC
360 370 380 390 400 410 420

AatII
|
ATTTCCAAGTCTCCACCCCATTGACGTCAATGGGAGTTTGTGTTTGGCACCAAAATCAACGGGACTTTCCA
TAAAGGTTTCAGAGGTGGGGTAACTGCAGTTACCCTCAAACAAAACCGTGGTTTTAGTTGCCCTGAAAGGT
430 440 450 460 470 480 490

AAATGTCGTAACAACTCCGCCCCATTGACGCAAATGGGCGGTAGGCGTGTACGGTGGGAGGTCTATATAA
TTTACAGCATTGTTGAGGCGGGGTAAGTGCAGTTTACCCGCCATCCGCACATGCCACCCTCCAGATATATT
500 510 520 530 540 550 560

AgeI
|
NheI Eco47 III NcoI
| | | |
GCAGAGCTGGTTTAGTGAACCGTCAGATCCGCTAGCGCTACCGGTCGCCACCATGGTGAGCAAGGGCGAG
CGTCTCGACCAAATCACTTGGCAGTCTAGGCGATCGCGATGGCCAGCGGTGGTACCACTCGTTCCCGCTC
570 580 590 600 610 620 630

BseRI
|
GAGCTGTTCCACCGGGGTGGTGCCCATCCTGGTCGAGCTGGACGGCGACGTAAACGGCCACAAGTTCAGCG
CTCGACAAGTGGCCCCACCACGGGTAGGACCAGCTCGACCTGCCGCTGCATTTGCCGGTGTTCAGTTCG
640 650 660 670 680 690 700

BcgI BsgI
| |
TGTCGGGCGAGGGCGAGGGCGATGCCACCTACGGCAAGCTGACCCTGAAGTTCATCTGCACCACCGGCAA
ACAGGCCGCTCCCGCTCCCGCTACGGTGGATGCCGTTTCTGACTGGGACTTCAAGTAGACGTGGTGGCCGTT
710 720 730 740 750 760 770

BssSI PstI
| |
GCTGCCCCGTGCCCTGGCCCCACCCTCGTGACCACCTTCGGCTACGGCCTGCAGTGCTTCGCCCCGCTACCCC
CGACGGGCACGGGACCGGGTGGGAGCACTGGTGGAAGCCGATGCCGGACGTCACGAAGCGGGCGATGGGG
780 790 800 810 820 830 840

GACCACATGAAGCAGCACGACTTCTTCAAGTCCGCCATGCCCGAAGGCTACGTCCAGGAGCGCACCATCT
CTGGTGTACTTCGTCGTGCTGAAGAAGTTCAGGCGGTACGGGCTTCCGATGCAGGTCCTCGCGTGGTAGA
850 860 870 880 890 900 910

TCTTCAAGGACGACGGCAACTACAAGACCCGCGCCGAGGTGAAGTTCGAGGGCGACACCCTGGTGAACCG
AGAAGTTCCTGCTGCCGTTGATGTTCTGGGCGCGGCTCCACTTCAAGCTCCCGCTGTGGGACCACTTGGC
920 930 940 950 960 970 980

Eco57 I
|
CATCGAGCTGAAGGGCATCGACTTCAAGGAGGACGGCAACATCCTGGGGCACAAGCTGGAGTACAACTAC
GTAGCTCGACTTCCCGTAGCTGAAGTTCCTCCTGCCGTTGTAGGACCCGTGTTTCGACCTCATGTTGATG
990 1000 1010 1020 1030 1040 1050

BpmI
|
AACAGCCACAACGTCTATATCATGGCCGACAAGCAGAAGAACGGCATCAAGGTGAAGTTCAAGATCCGCC
TTGTGCGGTGTTGCAGATATAGTACCGGCTGTTCTGTTCTTCCGCTAGTTCCACTTGAAGTTCTAGGCGG
1060 1070 1080 1090 1100 1110 1120

BsgI
|
ACAACATCGAGGACGGCAGCGTGCAGCTCGCCGACCACTACCAGCAGAACACCCCCATCGGCGACGGCCC
TGTTGTAGCTCCTGCCGTCGCACGTCGAGCGGCTGGTGATGGTCGTCTTGTGGGGGTAGCCGCTGCCGGG
1130 1140 1150 1160 1170 1180 1190

CGTGCTGCTGCCCCGACAACCACTACCTGAGCTACCAGTCCGCCCTGAGCAAAGACCCCAACGAGAAGCGC
GCACGACGACGGGCTGTTGGTGTATGGACTCGATGGTCAAGCGGGACTCGTTTCTGGGGTTGCTCTTCGCG
1200 1210 1220 1230 1240 1250 1260

BpmI BsrGI

GATCACATGGTCCTGCTGGAGTTCGTGACCGCCGCCGGGATCACTCTCGGCATGGACGAGCTGTACAAGT
CTAGTGTACCAGGACGACCTCAAGCACTGGCGGCGGCCCTAGTGAGAGCCGTACCTGCTCGACATGTTCA
1270 1280 1290 1300 1310 1320 1330

XhoI

BspEI Bgl II EcoRV Sal I

CCGGACTCAGATCTCGAGCTATGGATGATGATATCGCCGCGCTCGTCGTCGACAACGGCTCCGGCATGTG
GGCCTGAGTCTAGAGCTCGATACCTACTACTATAGCGGCGCGAGCAGCAGCTGTTGCCGAGGCCGTACAC
1340 1350 1360 1370 1380 1390 1400

Bgl I BbeI

SmaI EheI

NaeI BbsI NarI

NgoMI XmaI KasI

CAAGGCCGGCTTCGCGGGCGACGATGCCCCCGGGCCGTCTTCCCCTCCATCGTGGGGCGCCCCAGGCAC
GTTCCGGCCGAAGCGCCCGCTGCTACGGGGGGCCCGGCAGAAGGGGAGGTAGCACCCCGCGGGGTCCGTG
1410 1420 1430 1440 1450 1460 1470

CAGGGCGTGATGGTGGGCATGGGTCAGAAGGATTCTATGTGGGCGACGAGGCCAGAGCAAGAGAGGCA
GTCCCGCACTACCACCCGTACCCAGTCTTCTTAAGGATACACCCGCTGCTCCGGGTCTCGTTCTCTCCGT
1480 1490 1500 1510 1520 1530 1540

Eco57 I

TCCTCACCTGAAGTACCCATCGAGCACGGCATCGTCACCAACTGGGACGACATGGAGAAAATCTGGCA
AGGAGTGGGACTTCATGGGGTAGCTCGTGCCGTAGCAGTGGTTGACCCTGCTGTACCTCTTTTAGACCGT
1550 1560 1570 1580 1590 1600 1610

BseRI

DraIII

CCACACCTTCTACAATGAGCTGCGTGTGGCTCCCGAGGAGACCCCGTGCTGCTGACCGAGGCCCCCTG
GGTGTGGAAGATGTTACTCGACGCACACCGAGGGCTCCTCGTGGGGCACGACGACTGGCTCCGGGGGGAC
1620 1630 1640 1650 1660 1670 1680

BsaI

AACCCCAAGGCCAACCGCGAGAAGATGACCCAGATCATGTTTGAGACCTTCAACACCCAGCCATGTACG
TTGGGGTTCCGGTTGGCGCTCTTCTACTGGGTCTAGTACAACTCTGGAAGTTGTGGGGTCCGTACATGC
1690 1700 1710 1720 1730 1740 1750

TTGCTATCCAGGCTGTGCTATCCCTGTACGCCTCTGGCCGTACCACTGGCATCGTGATGGACTCCGGTGA
AACGATAGGTCCGACACGATAGGGACATGCGGAGACCGGCATGGTGACCGTAGCACTACCTGAGGCCACT
1760 1770 1780 1790 1800 1810 1820

BstEII BcgI
Tth111 I DraIII
| ||
CGGGGTCACCCACACTGTGCCCATCTACGAGGGGTATGCCCTCCCCATGCCATCCTGCGTCTGGACCTG
GCCCCAGTGGGTGTGACACGGGTAGATGCTCCCCATACGGGAGGGGTACGGTAGGACGCAGACCTGGAC
1830 1840 1850 1860 1870 1880 1890

PpuMI BspHI EagI
| | |
GCTGGCCGGGACCTGACTGACTACCTCATGAAGATCCTACCGAGCGCGGCTACAGCTTCACCACCACGG
CGACCGGCCCTGGACTGACTGATGGAGTACTTCTAGGAGTGGCTCGCGCCGATGTCTGAAGTGGTGGTGGC
1900 1910 1920 1930 1940 1950 1960

BsrBI
|
CCGAGCGGGAAATCGTGCGTGACATTAAGGAGAAGCTGTGCTACGTCGCCCTGGACTTCGAGCAAGAGAT
GGCTCGCCCTTTAGCACGCACTGTAATTCCTCTTCGACACGATGCAGCGGGACCTGAAGCTCGTTCTCTA
1970 1980 1990 2000 2010 2020 2030

SapI
EarI
MscI BseRI XcmI BpmI DrdI
| | | | |
GGCCACGGCTGCTTCCAGCTCCTCCCTGGAGAAGAGCTACGAGCTGCCTGACGGCCAGGTCATCACCATT
CCGGTGCCGACGAAGGTCGAGGAGGGACCTCTTCTCGATGCTCGACGGACTGCCGGTCCAGTAGTGGTAA
2040 2050 2060 2070 2080 2090 2100

BsrDI
BsrBI Bsu36 I EarI
| | |
GGCAATGAGCGGTTCCGCTGCCCTGAGGCACTCTTCCAGCCTTCCTTCCTGGGCATGGAGTCCTGTGGCA
CCGTTACTCGCCAAGGCGACGGGACTCCGTGAGAAGGTCGGAAGGAAGGACCCGTACCTCAGGACACCGT
2110 2120 2130 2140 2150 2160 2170

BspHI
|
TCCACGAAACTACCTTCAACTCCATCATGAAGTGTGACGTGGACATCCGCAAAGACCTGTACGCCAACAC
AGGTGCTTTGATGGAAGTTGAGGTAGTACTTCACACTGCACCTGTAGGCGTTTCTGGACATGCGGTTGTG
2180 2190 2200 2210 2220 2230 2240

BsrDI
|
AGTGCTGTCTGGCGGCACCACCATGTACCCTGGCATTGCCGACAGGATGCAGAAGGAGATCACTGCCCTG
TCACGACAGACCGCGTGGTGGTACATGGGACCGTAACGGCTGTCCTACGTCTTCCTCTAGTGACGGGAC
2250 2260 2270 2280 2290 2300 2310

BsrDI
BseRI
BsaBI ScaI
|| |
GCACCCAGCACAATGAAGATCAAGATCATTGCTCCTCCTGAGCGCAAGTACTCCGTGTGGATCGGCGGCT
CGTGGGTCGTGTTACTTCTAGTTCTAGTAACGAGGAGGACTCGCGTTCATGAGGCACACCTAGCCGCCGA
2320 2330 2340 2350 2360 2370 2380

BsaBI
|
CCATCCTGGCCTCGCTGTCCACCTTCCAGCAGATGTGGATCAGCAAGCAGGAGTATGACGAGTCCGGCCC
GGTAGGACCGGAGCGACAGGTGGAAGGTCGTCTACACCTAGTCGTTTCGTCCTCATACTGCTCAGGCCGGG
2390 2400 2410 2420 2430 2440 2450

BamHI XbaI Bcl I BsaBI
| | | |
CTCCATCGTCCACCGCAAATGCTTCTAGGGATCCACCGGATCTAGATAACTGATCATAATCAGCCATACC
GAGGTAGCAGGTGGCGTTTACGAAGATCCCTAGGTGGCCTAGATCTATTGACTAGTATTAGTCGGTATGG
2460 2470 2480 2490 2500 2510 2520

DraI
|
ACATTTGTAGAGGTTTTACTTGCTTTAAAAAACCTCCCACACCTCCCCCTGAACCTGAAACATAAAATGA
TGTAACATCTCCAAAATGAACGAAATTTTTTGGAGGGTGTGGAGGGGGACTTGGACTTTGTATTTTACT
2530 2540 2550 2560 2570 2580 2590

BsmI MfeI HpaI
| | |
ATGCAATTGTTGTTGTTAACTTGTTTATTGCAGCTTATAATGGTTACAAATAAAGCAATAGCATCACAAA
TACGTTAACAACAACAATTGAACAAATAACGTCGAATATTACCAATGTTTATTTTCGTTATCGTAGTGTTT
2600 2610 2620 2630 2640 2650 2660

BsmI Afl II
| |
TTTCACAAATAAAGCATTTTTTTTCACTGCATTCTAGTTGTGGTTTGTCCAACTCATCAATGTATCTTAA
AAAGTGTTTATTTTCGTAAAAAAGTGACGTAAGATCAACACCAAACAGGTTTGAGTAGTTACATAGAATT
2670 2680 2690 2700 2710 2720 2730

SspI
|
GGCGTAAATTGTAAGCGTTAATATTTTGTTAAAATTCGCGTTAAATTTTTTGTTAAATCAGCTCATTTTTT
CCGCATTTAACATTCGCAATTATAAAACAATTTTAAGCGCAATTTAAAAACAATTTAGTCGAGTAAAAAA
2740 2750 2760 2770 2780 2790 2800

AACCAATAGGCCGAAATCGGCAAAATCCCTTATAAATCAAAGAATAGACCGAGATAGGGTTGAGTGTTG
TTGGTTATCCGGCTTTAGCCGTTTTAGGGAATATTTAGTTTTCTTATCTGGCTCTATCCCAACTCACAAAC
2810 2820 2830 2840 2850 2860 2870

DrdI
|
TTCCAGTTTGAACAAGAGTCCACTATTAAGAAGCTGGACTCCAACGTCAAAGGGCGAAAAACCGTCTA
AAGGTCAAACCTTGTTCTCAGGTGATAATTTCTTGACCTGAGGTTGCAGTTTCCCGCTTTTTTGGCAGAT
2880 2890 2900 2910 2920 2930 2940

DraIII
|
TCAGGGCGATGGCCCACTACGTGAACCATCACCTAATCAAGTTTTTTGGGGTCGAGGTGCCGTAAAGCA
AGTCCCGCTACCGGGTGATGCACTTGGTAGTGGGATTAGTTCAAAAAACCCAGCTCCACGGCATTTCGT
2950 2960 2970 2980 2990 3000 3010

CTAAATCGGAACCCCTAAAGGGAGCCCCGATTTAGAGCTTGACGGGGAAAGCCGGCGAACGTGGCGAGAA
GATTTAGCCTTGGGATTTCCCTCGGGGGCTAAATCTCGAACTGCCCTTTTCGGCCGCTTGACACCGCTCTT
3020 3030 3040 3050 3060 3070 3080

NaeI
NcoMI
| |

AGGAAGGGAAGAAAGCGAAAGGAGCGGGCGCTAGGGCGCTGGCAAGTGTAGCGGTCACGCTGCGCGTAAC
TCCTTCCCTTCTTTTCGCTTTTCCTCGCCCGCGATCCCGCGACCGTTCACATCGCCAGTGCAGCGCGATTG
3090 3100 3110 3120 3130 3140 3150

BsrBI
|

CACCACACCCGCCGCGCTTAATGCGCCGCTACAGGGCGCGTCAGGTGGCACTTTTCGGGGAAATGTGCGC
GTGGTGTGGGCGGCGCGAATTACGCGGCGATGTCCCGCGCAGTCCACCGTAAAAGCCCCTTTACACGCG
3160 3170 3180 3190 3200 3210 3220

BspHI
BsrBI
| |

GGAACCCCTATTTGTTTATTTTCTAAATACATTCAAATATGTATCCGCTCATGAGACAATAACCCTGAT
CCTTGGGGATAAACAAATAAAAAGATTTATGTAAGTTTATACATAGGCGAGTACTCTGTTATTGGGACTA
3230 3240 3250 3260 3270 3280 3290

SspI EarI Bsu36 I PvuII
| | | |

AAATGCTTCAATAATATTGAAAAAGGAAGAGTCCTGAGGCGGAAAGAACCAGCTGTGGAATGTGTGTCAG
TTTACGAAGTTATTATAACTTTTTCTTCTCAGGACTCCGCCTTTCTTGGTCGACACCTTACACACAGTC
3300 3310 3320 3330 3340 3350 3360

NsiI
SphI
Ppu10 I
| | |

TTAGGGTGTGGAAAGTCCCCAGGCTCCCCAGCAGGCAGAAAGTATGCAAAGCATGCATCTCAATTAGTCAG
AATCCACACCTTTTCAGGGGTCCGAGGGGTTCGTCCGTCTTCATACGTTTCGTACGTAGAGTTAATCAGTC
3370 3380 3390 3400 3410 3420 3430

NsiI
SphI
Ppu10 I
| | |

SexAI
|

CAACCAGGTGTGGAAAGTCCCCAGGCTCCCCAGCAGGCAGAAAGTATGCAAAGCATGCATCTCAATTAGTC
GTTGGTCCACACCTTTTCAGGGGTCCGAGGGGTTCGTCCGTCTTCATACGTTTCGTACGTAGAGTTAATCAG
3440 3450 3460 3470 3480 3490 3500

AGCAACCATAGTCCCGCCCCTAACTCCGCCCCTAACTCCGCCCAGTTCCGCCCATTCTCCG
TCGTTGGTATCAGGGCGGGGATTGAGGCGGGTAGGGCGGGGATTGAGGCGGGTCAAGGCGGGTAAGAGGC
3510 3520 3530 3540 3550 3560 3570

NcoI
|
CCCCATGGCTGACTAATTTTTTTTATTTATGCAGAGGCCGAGGCCGCCTCGGCCTCTGAGCTATTCCAGA
GGGGTACCGACTGATTAATAAAAAATAAATACGTCTCCGGCTCCGGCGGAGCCGGAGACTCGATAAGGTCT
3580 3590 3600 3610 3620 3630 3640

Bgl I
SfiI
|
AGTAGTGAGGAGGCTTTTTTGGAGGCCTAGGCTTTTGCAAAGATCGATCAAGAGACAGGATGAGGATCGT
TCATCACTCCTCCGAAAAACCTCCGGATCCGAAAACGTTTCTAGCTAGTTCTCTGTCCTACTCCTAGCA
3650 3660 3670 3680 3690 3700 3710

AvrII
StuI
BseRI
|
TTCGCATGATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTCGGCTA
AAGCGTACTAACTTGTCTACCTAACGTGCGTCCAAGAGGCCGGCGAACCCACCTCTCCGATAAGCCGAT
3720 3730 3740 3750 3760 3770 3780

EagI
|
TGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTCAGCGCAGGGGCGCCCCG
ACTGACCCGTGTTGTCTGTTAGCCGACGAGACTACGGCGGCACAAGGCCGACAGTCGCGTCCCCGCGGGC
3790 3800 3810 3820 3830 3840 3850

BbeI
EheI
NarI
KasI
||
GTTCTTTTTGTCAAGACCGACCTGTCCGGTGCCCTGAATGAACTGCAAGACGAGGCAGCGCGGCTATCGT
CAAGAAAAACAGTTCTGGCTGGACAGGCCACGGGACTTACTTGACGTTCTGCTCCGTCGCGCCGATAGCA
3860 3870 3880 3890 3900 3910 3920

DrdI
|
GGCTGGCCACGACGGGCGTTCCTTGCGCAGCTGTGCTCGACGTTGTCACTGAAGCGGGAAGGGACTGGCT
CCGACCGGTGCTGCCCAGGAACGCGTCGACACGAGCTGCAACAGTGAAGTTCGCCCTTCCCTGACCGA
3930 3940 3950 3960 3970 3980 3990

PvuII
MscI
|
FspI
|
Tth111 I
|
GCTATTGGGCGAAGTGCCGGGGCAGGATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATC
CGATAACCCGCTTACGGCCCCGTCTAGAGGACAGTAGAGTGGAACGAGGACGGCTCTTTCATAGGTAG
4000 4010 4020 4030 4040 4050 4060

Eco57 I
|
ATGGCTGATGCAATGCGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGACCACCAAGCGAAAC
TACCGACTACGTTACGCCGCCGACGTATGCGAACTAGGCCGATGGACGGGTAAAGCTGGTGGTTTCGCTTTG
4070 4080 4090 4100 4110 4120 4130

BsrDI
|
BspMI
|

EarI
SapI
|
ATCGCATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTGATCAGGATGATCTGGACGAAGAGCA
TAGCGTAGCTCGCTCGTGCATGAGCCTACCTTCGGCCAGAACAGCTAGTCCTACTAGACCTGCTTCTCGT
4140 4150 4160 4170 4180 4190 4200

SphI
|
TCAGGGGCTCGCGCCAGCCGAAGTTCGCCAGGCTCAAGGCGAGCATGCCCCAGGCGAGGATCTCGTC
AGTCCCCGAGCGCGGTTCGGCTTGACAAGCGGTCCGAGTTCCGCTCGTACGGGCTGCCGCTCCTAGAGCAG
4210 4220 4230 4240 4250 4260 4270

NcoI
|
GTGACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAATGGCCGCTTTTCTGGATTCATCGACT
CACTGGGTACCGCTACGGACGAACGGCTTATAGTACCACCTTTTACCGGCGAAAAGACCTAAGTAGCTGA
4280 4290 4300 4310 4320 4330 4340

NaeI
NcoI
| |
RsrII
|
GTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGACATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCT
CACCGGCCGACCCACACCGCCTGGCGATAGTCCTGTATCGCAACCGATGGGCACTATAACGACTTCTCGA
4350 4360 4370 4380 4390 4400 4410

Eco57 I
|
BssSI
|
BsrBI
|
TGGCGGCGAATGGGCTGACCGCTTCCTCGTGCTTTACGGTATCGCCGCTCCCGATTTCGAGCGCATCGCC
ACCGCCGCTTACCCGACTGGCGAAGGAGCACGAAATGCCATAGCGGCGAGGGCTAAGCGTCGCGTAGCGG
4420 4430 4440 4450 4460 4470 4480

BsrBI
|
BstBI
|
TTCTATCGCCTTCTTGACGAGTTCTTCTGAGCGGGACTCTGGGGTTTCGAAATGACCGACCAAGCGACGCC
AAGATAGCGGAAGAACTGCTCAAGAAGACTCGCCCTGAGACCCCAAGCTTTACTGGCTGGTTTCGCTGCGG
4490 4500 4510 4520 4530 4540 4550

BspMI
BssSI
|
CAACCTGCCATCACGAGATTTGATTCCACCGCCGCCTTCTATGAAAGGTTGGGCTTCGGAATCGTTTTTC
GTTGGACGGTAGTGCTCTAAAGCTAAGGTGGCGGCGGAAGATACTTTCCAACCCGAAGCCTTAGCAAAAG
4560 4570 4580 4590 4600 4610 4620

NaeI
BpmI
NcoI
| |
BpmI
AvrII
| |
CGGGACGCCGGCTGGATGATCCTCCAGCGCGGGGATCTCATGCTGGAGTTCTTCGCCACCCCTAGGGGGA
GCCCTGCGGCCGACCTACTAGGAGGTCGCGCCCCTAGAGTACGACCTCAAGAAGCGGGTGGGATCCCCCT
4630 4640 4650 4660 4670 4680 4690

GGCTAACTGAAACACGGAAGGAGACAATACCGGAAGGAACCCGCGCTATGACGGCAATAAAAAGACAGAA
CCGATTGACTTTGTGCCTTCCTCTGTTATGGCCTTCCTTGGGCGCGATACTGCCGTTATTTTTCTGTCTT
4700 4710 4720 4730 4740 4750 4760

TAAAACGCACGGTGTGGGTCGTTTGTTTCATAAACGCGGGGTTCCGGTCCCAGGGCTGGCACTCTGTGAT
ATTTTGCCTGCCACAACCCAGCAAACAAGTATTTGCGCCCCAAGCCAGGGTCCCAGCGTGAGACAGCTA
4770 4780 4790 4800 4810 4820 4830

BsaI

ACCCACCGAGACCCCATTTGGGGCCAATACGCCGCGTTTCTTCCTTTTCCCACCCACCCCCCAAGTT
TGGGGTGGCTCTGGGGTAACCCCGTTATGCGGGCGCAAAGAAGGAAAAGGGGTGGGGTGGGGGGTTCAA
4840 4850 4860 4870 4880 4890 4900

AlwNI

Bsu36 I

CGGGTGAAGGCCAGGGCTCGCAGCCAACGTCGGGGCGGCAGGCCCTGCCATAGCCTCAGGTTACTCATA
GCCCACTTCGGGTCCCAGCGTCGGTTGCAGCCCCGCCGTCCGGGACGGTATCGGAGTCCAATGAGTAT
4910 4920 4930 4940 4950 4960 4970

DraI

DraI

TATACTTTAGATTGATTTAAACTTCATTTTTAATTTAAAGGATCTAGGTGAAGATCCTTTTTGATAAT
ATATGAAATCTAACTAAATTTGAAGTAAAAATTAATTTTCTAGATCCACTTCTAGGAAAACTATTA
4980 4990 5000 5010 5020 5030 5040

BspHI

CTCATGACCAAAATCCCTTAACGTGAGTTTTTCGTTCCACTGAGCGTCAGACCCCGTAGAAAAGATCAAAG
GAGTACTGGTTTTAGGGAATTGCACTCAAAGCAAGGTGACTCGCAGTCTGGGGCATCTTTTCTAGTTTC
5050 5060 5070 5080 5090 5100 5110

GATCTTCTTGAGATCCTTTTTTTCTGCGCGTAATCTGCTGCTTGCAAACAAAAAACCACCGCTACCAGC
CTAGAAGAACTCTAGGAAAAAAGACGCGCATTAGACGACGAACGTTTGTTTTTTTGGTGGCGATGGTCG
5120 5130 5140 5150 5160 5170 5180

Eco57 I

GGTGGTTTGTGGCCGATCAAGAGCTACCAACTCTTTTCCGAAGGTAAGTGGCTTCAGCAGAGCGCAG
CCACCAAAACAAACGGCCTAGTTCTCGATGGTTGAGAAAAAGGCTTCCATTGACCGAAGTCGTCTCGCGTC
5190 5200 5210 5220 5230 5240 5250

ATACCAAATACTGTCCTTCTAGTGTAGCCGTAGTTAGGCCACCACTTCAAGAACTCTGTAGCACCGCCTA
TATGGTTTATGACAGGAAGATCACATCGGCATCAATCCGGTGGTGAAGTTCTTGAGACATCGTGGCGGAT
5260 5270 5280 5290 5300 5310 5320

AlwNI
|
CATACCTCGCTCTGCTAATCCTGTTACCAAGTGGCTGCTGCCAGTGGCGATAAGTCGTGTCTTACCGGGTT
GTATGGAGCGAGACGATTAGGACAATGGTCACCGACGACGGTCACCGCTATTTCAGCACAGAATGGCCCAA
5330 5340 5350 5360 5370 5380 5390

ApaLI
|
GGA CTCAAGACGATAGTTACCGGATAAGGCGCAGCGGTCGGGCTGAACGGGGGGTTCGTGCACACAGCCC
CCTGAGTTCTGCTATCAATGGCCTATTCCGCGTCGCCAGCCCGACTTGCCCCCAAGCACGTGTGTCTGGG
5400 5410 5420 5430 5440 5450 5460

AGCTTGGAGCGAACGACCTACACCGAACTGAGATACCTACAGCGTGAGCTATGAGAAAGCGCCACGCTTC
TCGAACCTCGCTTGCTGGATGTGGCTTGACTCTATGGATGTCGCACTCGATACTCTTTCGCGGTGCGAAG
5470 5480 5490 5500 5510 5520 5530

BssSI
|
CCGAAGGGAGAAAGGCGGACAGGTATCCGGTAAGCGGCAGGGTCGGAACAGGAGAGCGCACGAGGGAGCT
GGCTTCCCTCTTTCCGCCTGTCCATAGGCCATTCGCCGTCCAGCCTTGTCCTCTCGCGTGCTCCCTCGA
5540 5550 5560 5570 5580 5590 5600

DrdI
|
TCCAGGGGGAAACGCCTGGTATCTTTATAGTCCTGTCTGGGTTTTGCCACCTCTGACTTGAGCGTCGATTT
AGGTCCCCCTTTGCGGACCATAGAAATATCAGGACAGCCCAAAGCGGTGGAGACTGAACTCGCAGCTAAA
5610 5620 5630 5640 5650 5660 5670

TTGTGATGCTCGTCAGGGGGGCGGAGCCTATGAAAAACGCCAGCAACGCGGCCTTTTTACGGTTCCTGG
AACACTACGAGCAGTCCCCCGCCTCGGATACCTTTTTGCGGTCTGTTGCGCCGAAAAATGCCAAGGACC
5680 5690 5700 5710 5720 5730 5740

BspLU11 I
|
CCTTTTGCTGGCCTTTTGCTCACATGTTCTTTCCTGCGTTATCCCCTGATTCTGTGGATAACCGTATTAC
GGAAAACGACCGGAAAACGAGTGTACAAGAAAGGACGCAATAGGGGACTAAGACACCTATTGGCATAATG
5750 5760 5770 5780 5790 5800 5810

NsiI
Ppu10 I
| |
CGCCATGCAT
GCGGTACGTA
5820