



PvuI (7)
SgfI (6)
MfeI (82) **EcoNI (96)**

1 GGATCTGCATCGCTCCGGTGCCCGTCAGTGGCAGAGCGCACATCGCCACAGTCCCGGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA
 101 GAGAAGGTGGCGCGGGTAAACTGGAAAGTGATGTCGTGTAAGTGGCTCCGCCTTTTCCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

Psp1406I (203)
Bsu36I (291)

201 GTGAACGTTCTTTTTCGCAACGGGTTTGGCCGACAGTGAAGCTTCGAGGGCTCGCATCTCTCTTACCGCCGCCCGCCCTACCTGAGGCC
 301 GCCATCCACGCGGTTGAGTCGCGTTTCTGCCGCTCCCGCCTGTGGTGCTCTGAACTGCGTCCGCCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMIV (441)
NgoMI (441)
NaeI (441)

401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCTCAACTCTACGTCTTTGTTTCGTTT

KasI (535) **AgeI (552)** **BsrGI (563)** **BspLU11I (560)**
BspHI (593)

501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGCGCCCTACCTGAGATCACCGGTCAACATGTACAGAGAGTGGGTAGTGGTGAATGTTTTCATGAT
 601 GTTGTACGTCCAGCTGGTGCAGGGCTCCAGTAATGAACATGGACCAGTGAAGCGATCATCTCAGTCCACATTGGAACGATCTGAACAGCAGATCAGGGCT
 13▶ L Y V Q L V Q G S S N E H G P V K R S S Q S T L E R S E Q Q I R A
 1▶ M Y R E W V V V N V F M M

BstBI (722)
Bsp119I (722)
AsuII (722)

701 GCTTCTAGTTTGGAGAACTACTTCAATTACTACTCTGAGGACTGGAAGCTGTGGAGATGCAGGCTCAGGCTCAAAAGTTTTACCAGTATGGACTCTC
 47▶ A S S L E E L L R I T H S E D W K L W R C R L R L K S F T S M D S

AvrII (898)

801 GCTCAGCATCCCATCGGTCCACTAGGTTTGGCGCAACTTTCTATGACATTGAAACACTAAAAGTTATAGATGAAGAATGGCAAAGAACTCAGTGCAGCCC
 80▶ R S A S H R S T R F A A T F Y D I E T L K V I D E E W Q R T Q C S P

BstXI (923)
MscI (920)
BalI (920)

901 TAGGGAAACGTGCGTGGAGGTGGCCAGTGAGCTGGGGAAGAGTACCAACACATTTCTCAAGCCCCCTTGTGTGAACGTGTTCCGATGTGGTGGCTGTTGC
 113▶ R E T C V E V A S E L G K S T N T F F K P P C V N V F R C G G C C

EcoRV (1062)
Eco32I (1062)

1001 AATGAAGAGAGCCTTATCTGTATGAACACCAGCACCTCGTACATTTCCAAACAGCTCTTTGAGATATCAGTGCCTTTGACATCAGTACCTGAATTAGTGC
 147▶ N E E S L I C M N T S T S Y I S K Q L F E I S V P L T S V P E L V
 1101 CTGTTAAAGTTGCCAATCATAACAGGTTGTAAGTCTTGGCAACAGCCCCCGCCATCCATACTCAATTATCAGAAGATCCATCCAGATCCCTGAAGAAGA
 180▶ P V K V A N H T G C K C L P T A P R H P Y S I I R R S I Q I P E E D
 1201 TCGCTGTCCCATTCCAAAGAACTCTGTCTATTGACATGCTATGGGATAGCAAACAAATGTAATGTGTTTTGCAGGAGGAAAATCCACTTGTCTGGAACA
 213▶ R C S H S K K L C P I D M L W D S N K C K C V L Q E E N P L A G T

BglII (1398)

1301 GAAGACCACTCTCATCTCCAGGAACCAGCTCTCTGTGGGCCACACATGATGTTTGACGAAGATCGTTGCGAGTGTGTCTGTAACAAACACCATGTCCCAAAG
 247▶ E D H S H L Q E P A L C G P H M M F D E D R C E C V C K T P C P K
 1401 ATCTAATCCAGCACCCCCAAAACTGCAGTTGCTTTGAGTGCAAAGAAAGTCTGGAGACCTGCTGCCAGAAGCACAAGCTATTTCCACCCAGACACCTGCAG
 280▶ D L I Q H P K N C S C F E C K E S L E T C C Q K H K L F H P D T C S
 1501 CTGTGAGGACAGATGCCCTTTTCATACCAGACCATGTGCAAGTGGCAAACAGCATGTGCAAAGCATTGCCGCTTTCCAAAGGAGAAAAGGGCTGCCAG
 313▶ C E D R C P F H T R P C A S G K T A C A K H C R F P K E K R A A Q

Bsp120I (1600)
SphI (1666)

1601 GGGCCCCACAGCCGAAAGAAATCCTTGATTGAGCGTTCCAAAGTTCCTCCATCCCTGTCATTTTTAACAGCATGCTGCTTTGCCAAGTTGCTGTCACTGTTTT
 347▶ G P H S R K N P •

MscI (1784)
BalI (1784)
NheI (1778)
Eco47III (1775)

1701 TTTCCAGGTGTTAAAAAATCCATTTTACACAGCACAGTGAATCCAGACCACTTCCATTCACACCAGCGCTAGCTGGCCAGACATGATAA
 1801 GATACATTGATGAGTTTGGCAAAACCAACTAGAATGCAGTGAAAAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTAT

HpaI (1916) **MfeI (1927)**

1901 AAGCTGCAATAAACAAAGTTAAACAACAACAAATTGCATTCATTTTATGTTTCAGGTTTCAGGGGAGGTGTGGGAGGTTTTTAAAGCAAGTAAACCTCTAC

EcoRI (2012)

2001 AAATGTGGTATGGAATTCTAAAATACAGCATAGCAAACTTTAACCTCCAATCAAGCCTCTACTTGAATCCTTTTCTGAGGGATGAATAAGGCATAGGC
 2101 ATCAGGGGCTGTTGCCAATGTGCATTAGCTGTTTGACGCTCACCTTCTTTTCATGGAGTTAAGATATAGTGTATTTTCCAAGGTTTGAAGTACTGCTCTT

SspI (2251) **SwaI (2265)**

2201 CATTTCTTTATGTTTTAAATGCACTGACCTCCACATTCCTTTTTAGTAAAAATTTCAGAAAATAATTTAAATACATCATTGCAATGAAAATAAATGTTT
 2301 TTTATTAGGCAGAATCCAGATGCTCAAGGCCCTCATAATATCCCCAGTTTGTAGTTGGACTTAGGGAACAAAGAACCTTTAATAGAAATTTGGACAG

2401 CAAGAAAGCGAGCTTCTAGCTTTAGTTCCTGGTACTTGAGGGGATGAGTTCCTCAATGGTGGTTTTGACCAGCTTGCCATTCATCTCAATGAGCACA
 141 • N R T Y K L P I L E E I T T K V L K G N M E I L V
 SacI (2526) BstXI (2555)
 2501 AAGCAGTCAGGAGCATAGTCAGAGATGAGCTCTCTGCACATGCCACAGGGGCTGACCACCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGCCTGA
 114 F C D P A Y D S I L E R C M G C P S V V R I S R D V E D S Y P H R V
 StuI (2690) Eco147I (2690)
 2601 CAGCCACAATGGTGTCAAAGTCCTTCTGCCGTTGCTCACAGCAGACCAATGGCAATGGCTTACGACAGACAGTGACCCTGCCAATGTAGGCCTCAAT
 81 A V I T D F D K Q G N S V A S G I A I A E A C V T V R G I Y A E I
 2701 GTGGACAGCAGAGATGATCTCCCAGTCTTGGCTCTGATGGCCGCCGACATGGTGTCTGTTGCTCATAGAGCATGGTATCTTCTCAGTGGCGACC
 48 H V A S I I E G T K T R I A A G V H H K N D E Y L M T I K E T A V
 VspI (2898) AseI (2898)
 2801 TCCACCAGTCCAGATCCTGCTGAGAGATGTTGAAGTCTTTCATGATGGCCCTCTATAGTGAGTCGTATTATACTATGCCGATATACTATGCCGATGAT
 14 E V L E L D Q Q S I N F T K M
 BspHI (2840)
 2901 TAATTGTCAAACACAGCGTGGATGGCGTCTCCAGCTTATCTGACGGTCACTAAACGAGCTCTGCTTATATAGACCTCCACCGTACACGCCTACCGCCCA
 SacI (2955)
 3001 TTTGCGTCAATGGGGCGGAGTTGTTACGACATTTGGAAAGTCCCGTTGATTTACTAGTCAAACAAACTCCCATTGACGTCAATGGGGTGGAGACTTG
 SpeI (3053)
 3100 GAAATCCCCGTGAGTCAAACCGCTATCCACGCCATTGATGTACTGCCAAAACCGCATCATCATGGTAATAGCGATGACTAATACGTAGATGACTGCCA
 SnaBI (3181) Eco105I (3181)
 3200 AGTAGGAAAGTCCATAAGGTCATGTAAGTGGGCATAATGCCAGGCGGGCCATTTACCGTCATTGACGTCAATAGGGGGCTACTTGGCATATGATACACT
 NdeI (3286)
 3300 TGATGTAAGTCCAAAGTGGGAGTTTACCGTAAATACTCCACCCATTGACGTCAATGGAAAGTCCCTATTGGCGTTACTATGGGAACATACGTCATTATTG
 3400 ACGTCAATGGGCGGGGTCGTTGGGCGGTACGCCAGGCGGGCCATTTACCGTAAGTTATGTAACGCCTGCAGGTTAA TTAAGAACATGTGAGCAAAG
 SdaI (3464) PacI (3472) BspLU11I (3482)
 3498 GCCAGCAAAGGCCAGGAACCGTAAAAAGGCCGTTGCTGGCGTTTTTCCATAGGCTCCGCCCCCTGACGAGCATCACAAAAATCGACGCTCAAGTCA
 3598 GAGGTGGCGAAACCCGACAGGACTATAAAGATACCAGGCGTTTTCCCTGGAAGTCCCTCGTGCCTCTCTGTTCCGACCCTGCCGTTACCGGATAC
 3698 CTGTCCGCTTTCTCCCTTCGGGAAGCGTGGCGCTTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCGGTGTAGGTCGTTCCGCTCCAAGCTGGGCTGTG
 ApaLI
 3798 TGCACGAACCCCCGTTACGCCGACCGCTGCGCCTTATCCGTAAGTATCGTCTTGGTCCAAACCGGTAAGACACGACTTATCGCCACTGGCAGCAGC
 3898 CACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGAGTTCCTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGAACAGTATTTGGT
 3998 ATCTGCGCTCTGCTGAAGCCAGTTACCTTCGAAAAAGAGTTGGTAGCTTTGATCCGGCAAACAAACCACCGCTGGTAGCGGTGTTTTTTTGTGTTGCA
 4098 AGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTCTACGGGGTCTGACGCTCAGTGAACGAAAACCTCACGTTAAGGGAT
 EagI (4232)
 4198 TTTGGTCATGGCTAGTTAATTAACATTTAAATC AGCGCCGCAATAAAATATCTTTATTTTCATTACATCTGTGTGTTGGTTTTTTGTGTAATCGTAAC
 PacI (4212) SwaI (4221) NotI (4231)
 4298 TAACATACGCTCTCCATCAAACAAAACGAAACAAAACAAACTAGCAAATAGGCTGTCCCAGTGCAAGTGCAGGTGCCAGAACATTTCTCTATCGAA