



100

PvuI (7)
SgfI (6) MfeI (82) EcoNI (96)
1 GGATCTGGGATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCGGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA
101 GAGAAGGTGGCGCGGGTAAACTGGGAAAGTGATGTCGTGTAAGTGGCTCCGCCTTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

Psp1406I (203) **HindIII (245)** **Bsu36I (291)**
EcoNI (287)
201 GTGAACGTTCTTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGCTCGCATCTCTCTTACCGCGCCCGCCCTACCTGAGGGCC
301 GCCATCCACGCGGTTGAGTGCAGTTCGCCGCTCCCGCCTGTGGTGCCTCTGAAGTGCCTCCGCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMI (441)
NaeI (441)
401 GGGCCTTTGTCCGGCGCTCCCTTGGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCAACTCTACGTCTTTGTTTCGTTT

NcoI (560)
BstEII (555)
KasI (535) **AgeI (552)**
501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGCGCCCTACCTGAGATCACCGGTACCCATGGATTACAGGCCAGGTTCTTATGTTACTGCTGCT
1 M D S Q A Q V L M L L L L

Asp718I (610)
Acc65I (610)
601 ATGGGTATCTGGTACCTGTGGGCCAACAAAGCACCTTCTCAGATGGAGCGCAGCATAACCACCATCATCGACACCTTCCATCAATACTCTAGGAAGGAA
13 W V S G T C G A N K A P S Q M E R S I T T I I D T F H Q Y S R K E

EcoRI (727)
XmnI (723)
701 GGACACCCTGACACCCTGAGCAAGAAGGAATTCAGACAAATGGTGAAGCACAGTTGGCAACCTTTATGAAGAAAGAGAAGAGAAATGAAGCCCTCATAA
47 G H P D T L S K K E F R Q M V E A Q L A T F M K K E K R N E A L I

EcoO109I (812) **BspHI (891)**
801 ATGACATCATGGAGGACCTGGACACAAACCAGGACAATCAGCTGAGCTTTGAGGAGTGTATGATGCTGATGGCAAAGTTGATCTTTGCCGTGCATGAGAA
80 N D I M E D L D T N Q D N Q L S F E E C M M L M A K L I F A C H E K

Eco72I (917) **BstXI (930)** **MscI (927)** **NheI (986)**
901 GCTGCATGAGAACAACCCACGTGGGCATGGCCACAGTCATGGCAAAGGCTGTGGGAAGTAATTAAGAGGTCAGCCATGTGACAGCTGTAGCTGGCCAGA
113 L H E N N P R G H G H S H G K G C G K •

1001 CATGATAAGATACATTGATGAGTTTGGACAAACCACAACCTAGAATGCAGTGAAAAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTA

HpaI (1124) MfeI (1135)
1101 ACCATTATAAGCTGCAATAAACAAGTTAAACAACAATTGCATTCTTTATGTTTCAGGTTTCAGGGGAGGTGTGGGAGGTTTTTAAAGCAAGTAA

EcoRI (1220)
1201 ACCTCTACAAATGTGGTATGGAATCTAAATACAGCATAGCAAACTTTAACCTCCAAATCAAGCCTCTACTTGAATCCTTTCTGAGGGATGAATAAG
1301 GCATAGGCATCAGGGGCTGTGCCAATGTGCATTAGCTGTTTGCAGCCTCACCTCTTTCATGGAGTTTAAAGATATAGTATTTTCCCAAGGTTTGAAC

SspI (1459) **SwaI (1473)**
1401 TAGCTCTTCAATTTCTTTATGTTTTAAATGCACTGACCTCCACATTCCCTTTTTAGTAAAAATTCAGAAATAATTTAAATACATCATTGCAATGAAAT

EcoO109I (1534)
1501 AAATGTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTTCATAATATCCCCAGTTTAGTAGTTGGACTTAGGGAACAAAGAACCTTTAATAGAAA
1601 TTGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCCTGGTGTACTTGAGGGGATGAGTTTCTCAATGGTGGTTTTGACCAGCTTGCCATTCTCTCAA
1+1 • N R T Y K L P I L E E I T T K V L K G N M E I

SacI (1734) **BstXI (1763)**
1701 TGAGCACAAGCAGTCAGGAGCATAGTCAGAGATGAGCTCTCTGCACATGCCACAGGGGCTGACCACCTGATGGATCTGTCCACCTCATCAGAGTAGGG
117 L V 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

StuI (1898)
Eco147I
1801 GTGCCTGACAGCCACAATGGTGTCAAAGTCTTCTGCCGTTGCTCACAGCAGACCCAATGGCAATGGCTTCAGCACAGACAGTACCCTGCCAATGTAG
84 H R V 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
1901 GCCTCAATGTGGACAGCAGAGATGATCTCCCGAGTCTGGTCTGATGGCCGCCCGACATGGTGTCTTGTGCTCATAGAGCATGGTATCTTCTCAG
50 A E I 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

XmnI (2040)
2001 TGGCGACCTCCACCAGCTCCAGATCCTGCTGAGAGATGTTGAAGGTCTTCATGATGGCCCTCTATAGTGAGTCTATTATACTATGCCGATATACTATG
17 A V E V L E L D Q Q S I N F T K M

VspI (2106) **AseI (2106)** **SacI (2163)**
2101 CCGATGATTAATTGTCAAACAGCGTGGATGGCGTCTCCAGCTTATCTGACGGTTCACTAAACGAGCTCTGCTTATATAGACCTCCACCGTACACGCCT

SpeI (2261)
2201 ACCGCCCATTTGCGTCAATGGGGCGGAGTTGTTACGACATTTTGGAAAGTCCCGTTGATTTACTAGTCAAAAACAACTCCCATTTGACGTCAATGGGGTG

SnaBI (2389)
Eco105I (2389)

2300 GAGACTTGAAATCCCCGTGAGTCAAACCGCTATCCACGCCATTGATGTACTGCCAAAACCGCATCATCATGGTAATAGCGATGACTAATACGTAGATG

NdeI (2494)

2400 TACTGCCAAGTAGGAAAGTCCATAAGGTCATGTACTGGGCATAATGCCAGGCGGGCCATTTACCGTCATTGACGTCAATAGGGGGCGTACTTGGCATAT

2500 GATACACTTGATGTACTGCCAAGTGGGCAGTTTACCGTAAATACTCCACCCATTGACGTCAATGGAAAGTCCCTATTGGCGTTACTATGGGAACATACGT

PstI (2673)
SdaI (2672) PacI (2680) BspLU11I (2690)

2600 CATTATTGACGTCAATGGGCGGGGTCGTTGGGCGGTCAGCCAGGCGGGCCATTTACCGTAAGTTATGTAACGCCCTGCAGGTTAA TTAAGAACATGTG

2698 AGCAAAAGGCCAGCAAAGGCCAGGAACCGTAAAAAGGCCGCGTTGCTGGCGTTTTTCCATAGGCTCCGCCCCCTGACGAGCATCACAAAAATCGACGC

2798 TCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGATACCAGGCGTTTTCCCTGGAAAGCTCCCTCGTGCCTCTCCTGTTCCGACCCCTGCCGCTTA

2898 CCGGATACCTGTCCGCTTTCTCCCTTCGGAAGCGTGGCGCTTTCTCATAGCTCAGCTGTAGGTATCTCAGTTCGGTGTAGGTCGTTGCTCCAAGCT

ApaLI (3004)

2998 GGGCTGTGTGCACGAACCCCGTTTCCAGCCGACCGCTGCGCCTTATCCGGTAACTATCGTCTTGAGTCCAACCCGGTAAGACACGACTTATCGCCACTG

3098 GCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGTACAGAGTTCTTGAAGTGGTGGCCTAACACGGCTACACTAGAAGAACAG

3198 TATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAACAAACCACCGCTGGTAGCGGTGTTTTTTT

3298 TGTTTGAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGGTCTGACGCTCAGTGAACGAAAACTCACGT

EagI (3440)

PacI (3420) SmaI (3429) NotI (3439)

3398 TAAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAAATC AGCGGCCCAATAAAATATCTTTATTTTATTACATCTGTGTGTTGTTTTTTGTGTGA

3498 ATCGTAACTAACATACGCTCTCCATCAAACAAAACGAAACAAAACAACTAGCAAATAGGCTGTCCCAGTGAAGTGCAGGTGCCAGAACATTTCTC

3598 TATCGAA