



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

1 GGATCTGCGATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCCGAGAAGTTGGGGGAGGGGTGCGCAATTGAACGGGTGCCTA

101 GAGAAAGTGGCGCGGGTAAACTGGAAAGTGTCTGTACTGGCTCCGCCTTTTTCCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

HindIII (245)
Bsu36I (291)
Psp1406I (203)
PvuII (239)
EcoNI (287)

201 GTGAACGTTCTTTTTTCGCAACGGGTTTGCCGCCAGAACACAGCTGAAGCTTCGAGGGGCTCGCATCTCTCTTTCACCGCCCGCCGCCCTACCTGAGGCC

301 GCCATCCACGCCGTTGAGTTCGCGTTTCTGCCGCTCCCGCTGTGGTGCCTCCTGAAGTGCCTCGCCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMIV (441)

401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCCTGACCTGCTTGTCTCAACTCTACGCTTTTGTTCGTTT

BstEII (555)
AgeI (552) **NcoI (560)**
StuI (583)

501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGCGCCTACCTGAGATCACCGGTCACCATGGCGGGAGATCCACTCCAGGCCTCAGAGCAGCCG

Tth111I (634)
1▶ M A A E I H S R P Q S S R
NheI (685)

601 CCCGGTGTCTGCTGAGCAAGATAGAGGGCCACAGGACGCCGTACCGCCGCGCTGCTCATCCCAAGGAGGACGGCGTGATCACCGCTAGCGAGGACAGA

ScaI (734)
NcoI (779)

701 ACCATCCGAGTATGGCTGAAAAGAGACAGCGCCAGTACTGCCAGCATCTACCACACAATGGCCTCCCCTTGTCTGCCATGGCATTACCACCACGACA

801 GCAGGCGGATATTTGTGGGCCAGGATAATGGGGCTGTGATGGAATTTACGTTTCTGAAGATTTAATAAAAATGAATTTTATCAAGACCTATCCAGCCCA

BstXI (819)
MscI (957)
ApaLI (984)

901 CCAGAACCGCGTGTCTGTATCATCTTTCAGCCTGCTGCGCGAGTGGGTGATCAGCACTGGCCACGACAAGTGTGTGAGCTGGATGTGACCGCGCAGCGGG

1101 CCCTGCTGAAGCTGGAGCAGAACAACCTTGTTCAGTTATCACGACCTCAAGGGACATGAAGGTAGCATCGCCTTTGGTGGGACCCTATCCAACGGTT

BstAPI (1163)
SandI (1181)
EcoO109I (1181)

1201 ACTCTTCTCGGGAGCATCCGACAACAGCGTCATCATGTGGACATCGGGGACGAAAGGCCGACACTCCTCCTCAAGGCCACCATGACAGAGTGCAG

1401 AGTGGTTAGAAAAGCAGCTCCTGTGAGAGTGTGAGCAGCCCTTCTTCTGGAATATAAAACAGATGTGGGACACAAAGACCCTGGGCTTGGGCAGCATCA

PshAI (1414)
BspHI (1647)
NdeI (1672)

1501 CTGCAAGAAAGTGTGGGACGGCCTGTGTGGAAAGTGCAGCAGCAAGCGGTCCAGTTACCCCGTCATGGGTTTTGAGTCCAGGTTTCGAGTTTGTGATTCC

BstEII (1704)
NheI (1818)
NcoI (1679)

1601 TGTTACGACTCCATCAAAGATGAGGACCGACTTCTCTAGCAACATTTTCATGAAGGAAAACATAACATTTCCCATATGTCCATGGACATTGCAAGGGGAC

1701 TGATGGTGACCTGTGGGACAGATCGTGTGTGAAGATATGGGATATGACTCCTGTGGTGGGCTGCAGCCTGGCAACTGGATTTTCTCCACACTGATCCCA

EcoRI (1812)

1801 GAGCTGGGTGATGAATTCGCTAGCTCGACATGATAAGATACATTGATGAGTTTGGACAAACCACAACCTAGAATGCAGTAAAAAATGCTTTATTGTGA

HpaI (1981)
MfeI (1992)

1901 AATTTGTGATGCTATTGCTTTATTGTGAAATTTGTGATGCTATTGCTTTATTGTAAACCATTATAAGCTGCAATAAACAAGTTAAACAACAACAATTGCA

EcoRI (2077)

2001 TTCATTTTATGTTTCAGGTTTCAGGGGAGGTGTGGGAGTTTTTTAAAGCAAGTAAACCTCTACAAATGTGGTATGGAAATTTAAATAACAGCATAGCA

2101 AAACCTTAACTCCAATCAAGCCTCTACTTGAATCCTTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTGTTGCCAATGTGCATTAGCTGTTTG

SapI (2259)

2201 CAGCCTCACCTTCTTTCATGGAGTTTAAAGATATAGTGTATTTTCCCAAGTTTGAAGTACTGCTCTCATTTCTTTATGTTTTAAATGCACTGACCTCCAC

2301 **SspI (2316)** SwaI (2330) EcoO109I (2391)
ATTCCCTTTTATAGTAAAATATTCAGAAAATAATTTAAATACATCATTGCAATGAAAATAAATGTTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTTC

2401 ATAATATCCCCAGTTTAGTAGTTGGACTTAGGGAACAAAGAACCTTTAATAGAAATTGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCTCGTGT
141 ◀ • N R T Y

2501 **SacI (2591)**
ACTTGAGGGGATGAGTTCCTCAATGGTGGTTTTGACCAGCTTGCATTCTCAATGAGCACAAAGCAGTCAGGAGCATAGTCAGAGATGAGCTCTCT
136 ◀ K L P I L E E I T T K V L K G N M E I L V F C D P A Y D S I L E R

2601 **BstXI (2620)**
GCACATGCCACAGGGGCTGACCACCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGCCTGACAGCCACAATGGTGTCAAAGTCCTTCTGCCCGTTG
103 ◀ C M G C P S V V R I S R D V E D S Y P H R V A V I T D F D K Q G N

2701 **StuI (2755)**
CTCACAGCAGACCAATGGCAATGGCTTCTCAGCAGACAGTACCCTGCCAATGTAGGCCTCAATGTGGACAGCAGAGATGATCTCCCAGTCTTGGTCC
69 ◀ S V A S G I A I A E A C V T V R G I Y A E I H V A S I I E G T K T R

2801 **XmnI (2897)**
TGATGGCCGCCCCGACATGGTGTCTTGTCTCATAGAGCATGGTGTCTTCTCAGTGGCGACCTCCACCAGCTCCAGATCTGCTGAGAGATGTTGAA
36 ◀ I A A G V H H K N D E Y L M T I K E T A V E V L E L D Q Q S I N F

2901 **BbsI (2901)** **AseI (2963)**
GGTCTTCATGGTGGCCCTCTATAGTGAGTCGTATTATACTATGCCGATATACTATGCCGATGATTAATTGTCAAACAGCGTGGATGGCGTCTCCAGCT
3 ◀ T K M

3001 **SacI (3020)**
TATCTGACGGTCACTAAACGAGCTCTGCTTATATAGACCTCCACCCTACACGCCTACCGCCATTTGCGTCAATGGGGCGGAGTTGTTACGACATTTT

3101 **SpeI (3118)**
GGAAAGTCCCCTGATTTACTAGTCAAAAACAACTCCATTGACGTCAATGGGGTGGAGACTTGAAATCCCCGTGAGTCAAACCGCTATCCACGCCAT

3201 **SnaBI (3246)**
TGATGACTGCCAAAACCGCATCATCATGGTAATAGCGATGACTAATACGTAGATGACTGCCAAGTAGGAAAGTCCCATAGGTCATGACTGGGCATA

3301 **NdeI (3351)**
ATGCCAGCGGGCCATTTACCGTCATTGACGTCAATAGGGGGCTACTTGGCATATGATACACTTGTACTGCAAGTGGGCAGTTTACCGTAAATAC

3401 TCCACCCATTGACGTCAATGGAAAGTCCCTATTGGCGTACTATGGGAACATACGTCAATTATTGACGTCAATGGGGGGGGTCTTGGGCGGTGAGCCAG

3501 **PacI (3537)** **SdaI (3529)** **BspLU11I (3547)**
GCGGGCCATTTACCGTAAGTTATGTAACGCTGCAGGTTAAITAAAGAACATGTGAGCAAAAGGCCAGCAAAAGGCCAGGAACCGTAAAAAGCCGCGTTG
3601 CTGGCGTTTTTTCATAGGCTCCGCCCCCTGACGAGCATCACAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGATACCAGG
3701 CGTTTCCCCTGGAAGCTCCCTCGTGCCTCTCTGTTCGACCTGCCGTTACCGGATACCTGTCCGCTTCTCCCTTCGGAAGCGTGGCGTTTC

3801 **ApaLI (3861)**
TCATAGCTCAGCTGTAGGTATCTCAGTTCGGTGTAGGTGTTGCTCCAAGCTGGGTGTGTGCACGAACCCCGTTCAGCCCAGCCGCTGCGCCTTA

3901 TCCGGTAACTATCGTCTTGTGATCCAACCGGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGCGG

4001 GTGCTACAGAGTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGAAAAAG

4101 AGTTGGTAGCTCTTGATCCGGCAAAACAAACCACCGCTGGTAGCGGTGGTTTTTTTTGTTTGCAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAA

4201 **EagI (4297)** **PacI (4277)** **SwaI (4286)** **NotI (4296)**
GATCCTTTGATCTTTTCTACGGGTCTGACGCTCAGTGAACGAAAACCTCACGTTAAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAAATCAGCGG

4301 CCGCAATAAAATATCTTTATTTTATTACATCTGTGTGTTGGTTTTTTGTGTGAATCGTAACTAACATACGCTCTCCATCAAACAAAACGAAACAAAAC

4401 AAACCTAGCAAATAGGCTGTCCACAGTGAAGTGCAGGTGCCAGAACATTTCTCTATCGAA