



3301 AACTCTGGCTCACAGTACGCGTAGTGCAACCGAACGCGACCGCATGGTCAGAAAGCCGGGCACATCAGCGCCTGGCAGCAGTGGCGTCTGGCGGAAAACCT
726▶ InLeuTrpLeuThr ValI ArgVal ValI Gl nProAsnAl aThrAl aTrpSer Gl uAl aGl yHi s l l eSerAl aTrpGl nGl nTrpArgLeuAl aGl uAsnLe
3401 CAGTGTGACGCTCCCGCCGCGTCCCACGCCATCCCGCATCTGACCACAGCGAAATGGATTTTGCATCGAGCTGGGTAATAAGCGTTGGCAATTTAAC
759▶ uSer Val Thr LeuProAl aAl aSer Hi sAl a l l eProHi sLeuThr Thr Ser Gl uMetAspPheCys l l eGl uLeuGl yAsnLysArgTrpGl nPheAsn
3501 CGCCAGTCAGGCTTTCTTTCACAGATGTGGATTGGCGATAAAAAACAACCTGCTGACGCCGCTGCGCGATCAGTTACCCCGTGCACCGCTGGATAACGACA
793▶ ArgGl nSer Gl yPheLeuSer Gl nMetTrpl l eGl yAspLysLysGl nLeuLeuThr ProLeuArgAspGl nPheThr ArgAl aProLeuAspAsnAspl
3601 TTGGCGTAAGTGAAGCGACCCGATTGACCCTAACGCTGGGTGCAACGCTGGAAGGCGGCGGCCATTACCAGGCCGAAGCAGCGTTGTTGCAGTGCAC
826▶ l eGl yVal Ser Gl uAl aThr Arg l l eAspProAsnAl aTrpVal Gl uArgTrpLysAl aAl aGl yHi sTyrGl nAl aGl uAl aAl eLeuLeuGl nCysTh
3701 GGCAGATACACTTGCTGATGCGGTGCTGATTACGACCGCTCACGCGTGGCAGCATCAGGGGAAAACCTTATTTATCAGCCGGAAAACCTACCGGATTGAT
859▶ rAl aAspThr LeuAl aAspAl aVal l eu l l eThr ThrAl aHi sAl aTrpGl nHi sGl nGl yLysThr LeuPhe l l eSer ArgLysThr TyrArg l l eAsp
3801 GGTAGTGGTCAAATGGCGATTACCGTTGATGTTGAAGTGGCGAGCGATACCCGATCCGCGCGGATTGGCTGAACTGCCAGCTGGCGCAGGTAGCAG
893▶ Gl ySer Gl yGl nMetAl a l l eThr Val AspVal Gl uVal Al aSerAspThr ProHi sProAl aArg l l eGl yLeuAsnCysGl nLeuAl aGl nVal Al aG
BspLU11I (3994)

3901 AGCGGGTAAACTGGCTCGGATTAGGGCCGAAGAAAACCTATCCCGACCGCTTACTGCCGCTGTTTTGACCGCTGGGACTGTCATTGTGCAGACATGTA
926▶ l uArgVal AsnTrpLeuGl yLeuGl yProGl nGl uAsnTyrProAspArgLeuThrAl aAl aCysPheAspArgTrpAspLeuProLeuSerAspMetTy
4001 TACCCCTACGCTCTCCCGAGCGAAAACGGTCTGCGCTGCGGACGCGCAATTGAATATGCGCCACACAGTGGCGCGGCACTTCCAGTTCAACATC
959▶ r Thr ProTyrVal l PheProSer Gl uAsnGl yLeuArgCysGl yThr ArgGl uLeuAsnTyrGl yProHi sGl nTrpArgGl yAspPheGl nPheAsn l l e
4101 AGCCGCTACAGTCAACAGCAACTGATGAAACAGCCATCGCCATCTGCTCACGCGGAAGAAGGCACATGGCTGAATATCGACGGTTTCCATATGGGGA
993▶ SerArgTyrSer Gl nGl nLeuMetGl uThr Ser Hi sArgHi sLeuLeuHi sAl aGl uGl uGl yThr TrpLeuAsn l l eAspGl yPheHi sMetGl y l
4201 TTGGTGGCGACGACTCTGGAGCCCGTCAATCGCGGAAATACAGCTGAGCGCGGCTGCTACCATTACCAGTTGGTCTGGTGTCAAAAATAATAATC
1026▶ l eGl yGl yAspAspSer TrpSer ProSer Val SerAl aGl uLeuGl nLeuSerAl aGl yArgTyrHi sTyrGl nLeuVal TrpCysGl nLys●●●

NheI (4314)

EcoRI (4308)

4301 TAGTCGAGAATTTCGCTAGCTCGACATGATAAGATACATTGATGAGTTTGACAAAACCACAACCTAGAATGCAGTGAAAAAATGCTTTATTTGTGAAATTT
4401 GTGATGCTATTGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAACAAAGTTAACAAACAATTGCATTTCAT

SwaI (4579)

4501 TTTATGTTTCAGGTTTCAGGGGAGGTGTGGGAGTTTTTTAAAGCAAGTAAACCTCTACAAATGTGGTAGATCCATTTAAATGTTAATTAAGTACGCAT
4601 GACCAAAATCCCTTAACGTGAGTTTTTCGTTCCACTGAGCGTCAGACCCCGTAGAAAAGATCAAAGGATCTTCTTGAGATCCTTTTTTTCGCGGTAATC
4701 TGCTGCTTGCAAAACAAAAAACACCGCTACCAGCGGTGGTTTTGTTTGC CGGATCAAGAGCTACCAACTCTTTTTCCGAAGGTAAGTGGCTTCAGCAGAG
4801 CGCAGATACAAATACTGTTCTTCTAGTGTAGCCGTAGTTAGGCCACCACCTCAAGAAGCTCTGTAGCACCGCCTACATACCTCGCTCTGCTAATCTGTT
4901 ACCAGTGGCTGCTGCCAGTGGCGATAAGTCGTGCTTACCGGTTGGACTCAAGACGATAGTTACCGGATAAGGCGCAGCGGTGGGCTGAACGGGGGGT
5001 TCGTGCACACAGCCAGCTTGGAGCGAACGACCTACACCGAAGTACAGCTGAGCTATGAGAAAAGCCACGCTTCCCGAAGGGAGAAAGG
5101 CGGACAGGTATCCGGTAAGCGGAGGGTGGAAACAGGAGAGCGCACGAGGGAGCTTCCAGGGGAAACGCTGGTATCTTTATAGTCTGTGGGTTTTCG
5201 CCACCTCTGACTTGAGCGCTGATTTTTGTGATGCTGCTCAGGGGGCGGAGCCTATGAAAAACGCCAGCAACGCGGCCTTTTTACGGTTCTCGCCTTT

BspLU11I (5317) AseI (5355)

5301 TGCTGGCCTTTTGTGCACATGTTCTTAATTAATTTTTCAAAGTAGTTGACAATTAATCATCGGCATAGTATATCGGCATAGTATAATACGACTCACTA
5401 TAGGAGGGCCATCATGGCCAAGTTGACCAAGTGTCTCCAGTGTCTCACAGCCAGGGATGTGGCTGGAGCTGTTGAGTTCTGGACTGACAGGTTGGGGTTC
▶ 1▶ MetAl aLysLeuThr SerAl aVal l ProVal l LeuThrAl aArgAspVal Al aGl yAl aVal l Gl uPheTrpThrAspArgLeuGl yPhe
5501 TCCAGAGATTTTGTGGAGGATGACTTTGACGGTGTGGTCAGAGATGATGTCACCCGTTTCATCTCAGCAGTCCAGGACCAGGTGGTGCCTGACAACCCC
30▶ SerArgAspPheVal l Gl uAspAspPheAl aGl yVal l Val l ArgAspAspVal l Thr LeuPhe l l eSerAl aVal l Gl nAspGl nVal l Val l ProAspAsnThr l
5601 TGGCTTGGGTGTGGGTGAGAGGACTGGATGAGCTGTATGCTGAGTGGAGTGGTGTCCACCAACTTCAGGGATGCCAGTGGCCCTGCCATGACAGA
63▶ euAl aTrpVal l TrpVal l ArgGl yLeuAspGl uLeuTyrAl aGl uTrpSer Gl uVal l Val l Ser ThrAsnPheArgAspAl aSer Gl yProAl aMetThrGl
5701 GATTGGAGAGCAGCCCTGGGGGAGAGAGTTTTGCCCTGAGAGACCCAGCAGGCAACTGTGTGCACTTTTGGCAGAGGAGCAGGACTGAGGATAAGAAATTG
96▶ ul l eGl yGl uGl nProTrpGl yArgGl uPheAl aLeuArgAspProAl aGl yAsnCysVal l Hi sPheVal l Al aGl uGl uGl nAsp●●●

5801 AGTTTCAGAAAAGGGGGCTGAGTGGCCCTTTTTTCAACTAATTA