

BGT01_T01a-pET16-DEST

5' ttcttgaagacgaaagggcctcgtgatacgcctatTTTTATAGGTAATGTCATGATAATAATGGTTTCT
 0 ++++++
 3' aagaacttctgcttccccggagcactatgCGGATAAAAATATCCAATTACAGTACTATTATTACCAAAGA

70

Zral
AatII

5' tagacgtcaggtggcacttttcggggaaatgtgCGCGGAACCCCTATTTGTTATTTTTCTAAATACATT
 0 ++++++
 3' atctgcagtcaccCGTGAAAAGCCCTTTACACGCGCCTTGGGGATAAACAAATAAAAAGATTTATGTA

140

5' caaatatgtatccgctcatgagacaataaccctgataaatgcttcaataatattgaaaaaggaagagtat
 0 ++++++
 3' gtttatacataggcgagtactctgttattgggactatttacgaagtattataactTTTTCTTCTCATA

210

5' gagtattcaacatttccgtgtcgcccttattccctTTTTTGCGGCATTTTGCTTCTGTTTTTGCTCAC
 0 ++++++
 3' CTCATAAGTTGTAAGGCACAGCGGGAATAAGGGAAAAACGCCGTA AACCGGAAGGACAAAAACGAGTG

280

Ap

5' ccagaaacgctggtgaaagtaaaagatgctgaagatcagttgggtgcacgagtggttacatcgaactgg
 0 ++++++
 3' GGTCTTTCGACCACCTTTCATTTCTACGACTTCTAGTCAACCCACGTGCTCACCCAATGTAGCTTGACC

350

Ap

5' atctcaacagcggtaagatccttgagagtttccgccccgaagaacgTTTTCCAATGATGAGCACTTTTAA
 0 ++++++
 3' TAGAGTTGTCGCCATTCTAGGAACTCTCAAAGCGGGGCTTCTTGCAAAGGTACTACTCGTGAAAATT

420

Ap

5' agttctgctatgtggcgcggtattatcccgtgTTGACGCCGGGCAAGAGCAACTCGGTGCGCGCATACAC
 0 ++++++
 3' TCAAGACGATACACCGCGCCATAATAGGGCACAACCTGCGGCCGTTCTCGTTGAGCCAGCGGCGTATGTG

490

Ap

Scal

5' tattctcagaatgacttgggtgagtactcaccagtcacagaaaagcatcttacggatggcatgacagtaa
 0 ++++++
 3' ATAAGAGTCTTACTGAACCAACTCATGAGTGGTCAGTGTCTTTTCGTAGAATGCCTACCGTACTGTCAATT

560

Ap

PvuI

5' gagaattatgcagtgctgccataaccatgagtgataaacactgCGGCCAACTTACTTCTGACAACGATCGG
 0 ++++++
 3' CTCTTAATACGTCACGACGGTATTGGTACTCACTATTGTGACGCCGGTTGAATGAAGACTGTTGCTAGCC

630

Ap

BGT01_T01a-pET16-DEST

5' cgtaatctgctgcttgcaaacaaaaaacaccgctaccagcgggtggtttggttgcgggatcaagagcta
 1330
 3' gcattagacgacgaacgtttgttttttggggcgatggtcgccaccaaacaaacggcctagttctcgat
 Ori

5' ccaactcttttccgaaggtaactggcttcagcagagcgcagatacacaatactgtccttctagtgtagc
 1400
 3' ggttgagaaaaaggcttccattgaccgaagtcgtctcgctctatggtttatgacaggaagatcacatcg
 Ori

5' cgtagttaggccaccacttcaagaactctgtagcaccgcctacatacctcgctctgctaactctgttacc
 1470
 3' gcatcaatccgggtggtgaagtcttgagacatcgtggcggatgtatggagcgcagacgattaggacaatgg
 Ori

5' agtggctgctgccagtggcgataagtcgtgcttaccgggttgactcaagacgatagttaccggataag
 1540
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 Ori

5' ggcgacggtcgggctgaacggggggttcgtgcacacagcccagcttgagcgaacgacctacaccgaac
 1610
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 Ori

5' tgagatacctacagcgtgagctatgagaaagcgccacgcttcccgaaggagaaaggcggacaggtatcc
 1680
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 Ori

5' ggtaagcggcagggtcggaacaggagagcgcacgaggagcttccaggggaaacgcctggatctttat
 1750
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 Ori

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 1820
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 Ori

5' tatggaaaaacgccagcaacgcggcctttttacgggttctggccttttgetggccttttgetcacatggt
 1890
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 Ori

5' ctttcctgcgttatccccctgattctgtggataaccgtattaccgcctttgagtgagctgataaccgctcgc
 1960
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Pcil

BGT01_T01a-pET16-DEST

SapI

o
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 o
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2030

o
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2100

Tth111I

o
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2170

o
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2240

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2310

o
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2380

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2450

o
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2520

o
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2590

o
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2660

o
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2730

Bpu10I

o
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2800

BGT01_T01a-pET16-DEST

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3640

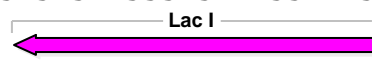
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3710

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3780



BsaXI'

5' gggaaacctgtcgtgccagctgcattaatgaatcggccaacgcgcggggagaggcggtttgctgattggg
 0 ++++++
 3' cccttggacagcacggctcgacgtaattacttagccggttgcgcgccctctccgccaacgcataacc

3850

Lac I

BsaXI

5' cgccaggggtgggtttttcttttcaccagtgagacgggcaacagctgattgccttcaccgcctggcctga
 0 ++++++
 3' gcggtcccaccaaagaaaagtggtcactctgccggttgtcgactaacgggaagtggcggaccgggact

3920

Lac I

HpaI

5' gagagttgcagcaagcgggtccacgctgggttgccccagcaggcgaaaatcctgttgatgggtggttaacg
 0 ++++++
 3' ctctcaacgctggttcgccaggtgcgaccaaacggggtcgctccgcttttaggacaaactaccaccaattgc

3990

Lac I

5' gcgggatataacatgagctgtcttcggtatcgtcgtatcccactaccgagatatccgcaccaacgcgcag
 0 ++++++
 3' cgccctatattgtactcgacagaagccatagcagcatagggatgatggctctataggcgtggttgcgcgctc

4060

Lac I

BssHII

5' cccggactcggtaatggcgcgcattgcgccagcgcacatctgatcgttggcaaccagcatcgcagtgggga
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4130

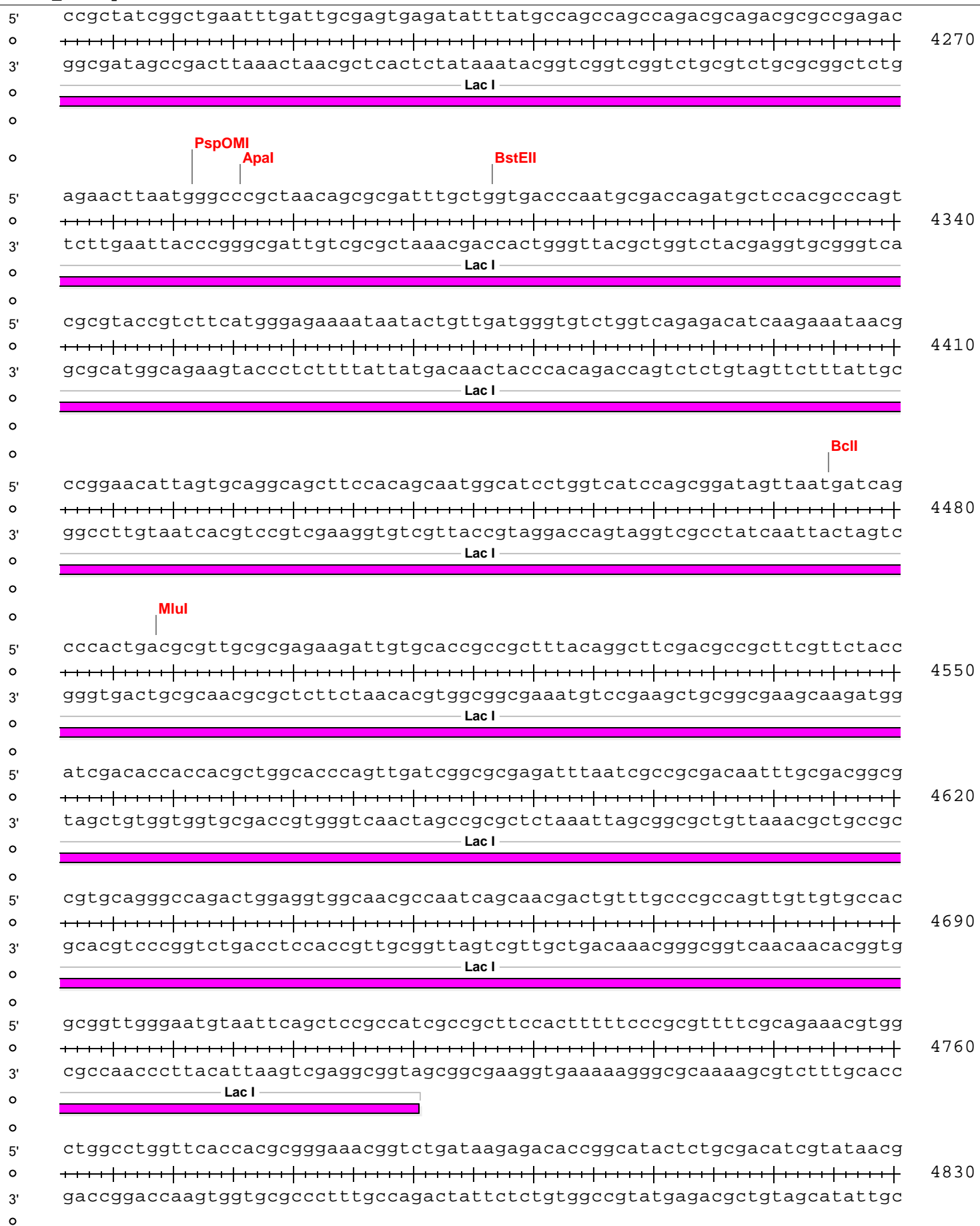
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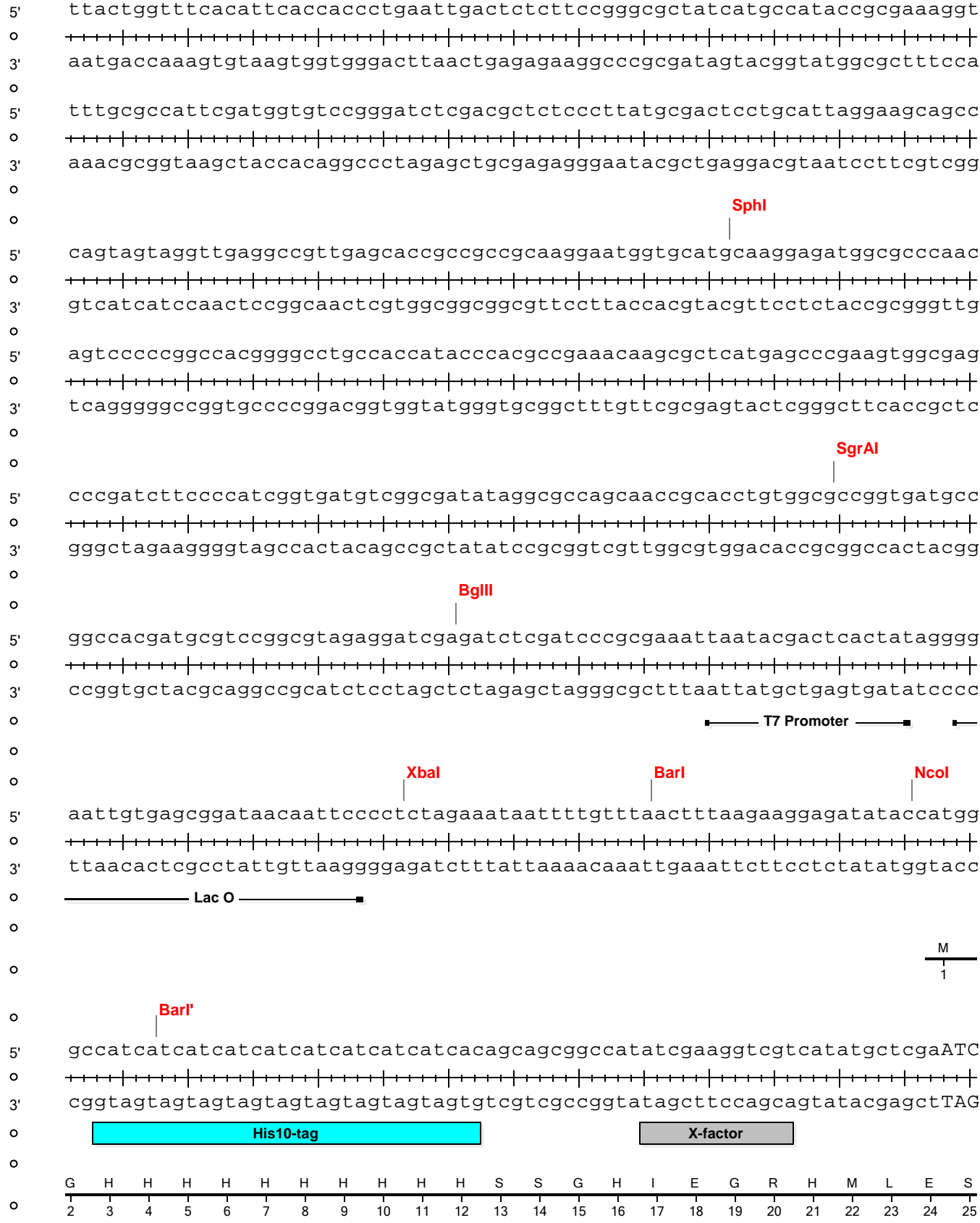
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BGT01_T01a-pET16-DEST



BGT01_T01a-pET16-DEST



4900

4970

5040

5110

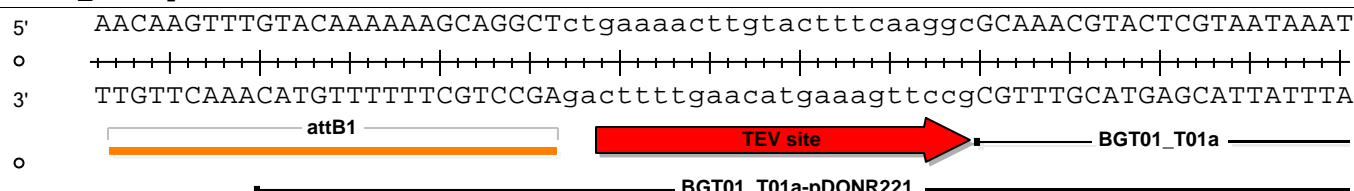
5180

5250

5320

5390

BGT01_T01a-pET16-DEST



5' AACAAAGTTTGTACAAAAAGCAGGCTctgaaaacttgtactttcaaggcGCAAACGTACTCGTAATAAAT
 3' TTGTTCAAACATGTTTTTTCGTCCGAgacttttgaacatgaaagttccgCGTTTGCATGAGCATTATTTA

T S L Y K K A G S E N L Y F Q G A N V L V I N
 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48

5460

5' TTCCCTGGAGAAGGTCATATAAATCCGACTTTAGCTATTGTAAGTGAGTTAATTCGGCGAGGGGAGACAG
 3' AAGGGACCTCTTCCAGTATATTTAGGCTGAAATCGATAACATTCACTCAATTAAGCCGCTCCCCTCTGTC

BGT01_T01a

5530

F P G E G H I N P T L A I V S E L I R R G E T
 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71

5' TTGTTTCGTATTGTATTGAAGATTATAGAAAGAAGATTGAAGCAACAGGTGCACAATTCCGAGTGTTTGA
 3' AACAAAGCATAACATAACTTCTAATATCTTTCTTCTAACTTCGTTGTCCACGTGTTAAGGCTCACAACT

BGT01_T01a

5600

V V S Y C I E D Y R K K I E A T G A Q F R V F E
 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95

5' GAATTCCTCTCTCAAATTAATATTATGGAGCGAGTAAATGAAGGTGGGAGTCCTTTGACGATGCTGTCT
 3' CTTAAAGGAGAGAGTTTAATTATAATACCTCGCTCATTACTTCCACCCTCAGGAACTGCTACGACAGA

BGT01_T01a

5670

N F L S Q I N I M E R V N E G G S P L T M L S
 96 97 98 99 100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118

5' CATATGATGGAAGCATCAGAACGTATTGTTACTCAAATTTGTAGAAGAAACAAAAGGGGAAAAGTACGATT
 3' GTATACTACCTTCGTAGTCTTGCATAACAATGAGTTTAACATCTTCTTTGTTTCCCCTTTTCATGCTAA

BGT01_T01a

5740

H M M E A S E R I V T Q I V E E T K G E K Y D
 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141

BGT01_T01a-pET16-DEST

5' ATTTGATATATGATAATCACTTTCAGTAGGACGTATTATAGCCAATGTTTTAAAGTTACCTAGTGTTC
 0 ++++++
 3' TAAACTATATACTATTAGTGAAAGGTCATCCTGCATAATATCGGTTACAAAATTTCAATGGATCACAAAG

5810

BGT01_T01a

BGT01_T01a-pDONR221

Y L I Y D N H F P V G R I I A N V L K L P S V S
 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165

5' TTCTTGTACAACGTTTGCTTTTAATCAGTACATTACTTTTAAACGATGAACATGAATCAAGAGAAGTAGAT
 0 ++++++
 3' AAGAACATGTTGCAAACGAAAATTAGTCATGTAATGAAAATTGCTACTTGTACTTAGTTCTCTTCATCTA

5880

BGT01_T01a

BGT01_T01a-pDONR221

S C T T F A F N Q Y I T F N D E H E S R E V D
 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188

5' GAAACGAATCCATTGTATCAATCTTGTTTAGCGGGAATGGAAAAATGGAACAAACAGTATGGAATGAAAT
 0 ++++++
 3' CTTTGCTTAGGTAACATAGTTAGAACAAATCGCCCTTACCTTTTACCTTGTTTGTGCATACCTTACTTTA

5950

BGT01_T01a

BGT01_T01a-pDONR221

E T N P L Y Q S C L A G M E K W N K Q Y G M K
 189 190 191 192 193 194 195 196 197 198 199 200 201 202 203 204 205 206 207 208 209 210 211

5' GTAATAGTATGTATGATATTATGAACCATCCTGGTGATATTACAAATTGTGTATACTTCAAAGGAATATCA
 0 ++++++
 3' CATTATCATACTATAAATACTTGGTAGGACCACTATAATGTTAACACATATGAAGTTTCCTTATAGT

6020

BGT01_T01a

BGT01_T01a-pDONR221

C N S M Y D I M N H P G D I T I V Y T S K E Y Q
 212 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235

5' GCCGCGTTCAGATGTATTTCGATGAATCGTATAAGTTTGTGGCCCATCAATTGCTACTCGAAAAGAAGTA
 0 ++++++
 3' CGGCGCAAGTCTACATAAGCTACTTAGCATATTCAAACAACCGGGTAGTTAACGATGAGCTTTTCTTCAT

6090

BGT01_T01a

BGT01_T01a-pDONR221

P R S D V F D E S Y K F V G P S I A T R K E V
 236 237 238 239 240 241 242 243 244 245 246 247 248 249 250 251 252 253 254 255 256 257 258

BGT01_T01a-pET16-DEST

5' GGTAGCTTTTCTATGGAAGATTTAAAAGATGAAAAATTGATTTTCATTTCTATGGGAACAGTTTTTAATG
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
3' CCATCGAAAGGATACCTTCTAAATTTTCTACTTTTAACTAAAAGTAAAGATACCCTTGTCAAAAATTAC

6160

BGT01_T01a

BGT01_T01a-pDONR221

G S F P M E D L K D E K L I F I S M G T V F N
259 260 261 262 263 264 265 266 267 268 269 270 271 272 273 274 275 276 277 278 279 280 281

5' AACAACTGAGTTATATGAAAAATGTTTGAAGCGTTTAAAGATGTAGAAGCGACAGTCGTATTAGTTGT
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
3' TTGTTGGACTCAATATACTTTTACAAAACCTTCGCAAATTTCTACATCTTCGCTGTCAGCATAATCAACA

6230

BGT01_T01a

BGT01_T01a-pDONR221

E Q P E L Y E K C F E A F K D V E A T V V L V V
282 283 284 285 286 287 288 289 290 291 292 293 294 295 296 297 298 299 300 301 302 303 304 305

5' TGGTAAGAAGATAAATATAAGTCAATTTGAAAACATTCGGAATAACTTTAAGTTGTATAATTATGTCCG
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
3' ACCATTCTTCTATTTATATTCAGTTAAACTTTTGTAAGGCTTATTGAAATTCAACATATTAATACACGGC

6300

BGT01_T01a

BGT01_T01a-pDONR221

G K K I N I S Q F E N I P N N F K L Y N Y V P
306 307 308 309 310 311 312 313 314 315 316 317 318 319 320 321 322 323 324 325 326 327 328

Psrl'

5' CAATTAGAACTATTACAGTATGCTGATGTATTCGTAACACACGGCGGTATGAATAGTTCAAGTGAAGCAC
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
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6370

BGT01_T01a

BGT01_T01a-pDONR221

Q L E L L Q Y A D V F V T H G G M N S S S E A
329 330 331 332 333 334 335 336 337 338 339 340 341 342 343 344 345 346 347 348 349 350 351

Psrl

5' TATATTACGGTGTCCCCTTAGTTGTAATTCGTAACAGGAGATCAGCCTTTAGTTGCGAAACGAGTAAA
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
3' ATATAATGCCACAGGGCAATCAACATTAAGGCCATTGTCCTCTAGTCGAAATCAACGCTTTGCTCATTT

6440

BGT01_T01a

BGT01_T01a-pDONR221

L Y Y G V P L V V I P V T G D Q P L V A K R V N
352 353 354 355 356 357 358 359 360 361 362 363 364 365 366 367 368 369 370 371 372 373 374 375

BGT01_T01a-pET16-DEST

5' TGAAGTAGGGGCTGGAATAAGGCTTAATCGCAAAGAATTAACCTTCTGAAATGTTACGTGAGTCTGTAAAG
 6510
 3' ACTTCATCCCCGACCTTATTCCGAATTAGCGTTTCTTAATTGAAGACTTTACAATGCACTCAGACATTTTC

BGT01_T01a

BGT01_T01a-pDONR221

E V G A G I R L N R K E L T S E M L R E S V K
 376 377 378 379 380 381 382 383 384 385 386 387 388 389 390 391 392 393 394 395 396 397 398

BstBI

5' AAAGTGATGGATGATGTAACGTTTAAGGAAAAAGTCGTAAAGTTGGAGAGTCACTTCGAAATGCTGGTG
 6580
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BGT01_T01a

BGT01_T01a-pDONR221

K V M D D V T F K E K S R K V G E S L R N A G
 399 400 401 402 403 404 405 406 407 408 409 410 411 412 413 414 415 416 417 418 419 420 421

PsiI

5' GTTATAATAGGGCAGTTGATGAAATATTA AAAATGAATTCATACTCAA AACTTAAATAGGACCCAGCTTT
 6650
 3' CAATATTATCCCGTCAACTACTTTATAATTTTTACTTAAGTATGAGTTTTGAATTTATCCTGGGTTCGAAA

BGT01_T01a

attB2

BGT01_T01a-pDONR221

G Y N R A V D E I L K M N S Y S K L K
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BamHI

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 6720
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attB2

BplI

5' ccaccgctgagcaataactagcataacccttggggcctctaaacgggtcttgaggggttttttgcctgaa
 6790
 3' ggtggcgactcgttattgatcgtattggggaaccccgagatttgccagaactcccaaaaaacgactt

T7 Terminator

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o
3' aatcgtaaattgacactatgtgatggcgtaatttcgaatagctactattcgacagtttgtactctt
o

HindIII ClaI

6997