

BGH89_B01a-pET16-DEST

5' aggaccgaaggagctaaccgcttttttgcacaacatgggggatcatgtaactcgccttgatcgttgggaa
 0 ++++++
 3' tcctggcttctcgcattggcgaaaaaacgtgttgtagccccctagtagtattgagcggaaactagcaaccctt
 0
 0
 0

700

Ap

PstI

5' ccggagctgaatgaagccataccaaacgacgagcgtgacaccacgatgcctgcagcaatggcaacaacgt
 0 ++++++
 3' ggccctcgacttacttcggtatggtttgctgctcgcaactgtgggtgctacggacgtcgttacccgttggtgca
 0
 0
 0

770

Ap

5' tgcgcaaactattaactggcgaactacttactctagcttcccggcaacaattaatagactggatggaggc
 0 ++++++
 3' acgcgtttgataattgaccgcttgatgaatgagatcgaagggccgttgtaattatctgacctacctccg
 0
 0
 0

840

Ap

5' ggataaagttgcaggaccacttctgcgctcggcccttcggctggctggtttattgctgataaatctgga
 0 ++++++
 3' cctatttcaacgctcctggtgaagacgcgagccgggaaggccgaccgaccaataacgactatntagacct
 0
 0
 0

910

Ap

Bsal

5' gccggtgagcgtgggtctcgcggtatcattgcagcactggggccagatggtaagccctcccgtatcgtag
 0 ++++++
 3' cggccactcgcaccagagcgcctatagtaacgtcgtgaccccggtctaccattcgggagggcatagcatc
 0
 0
 0

980

Ap

AhdI

5' ttatctacacgacggggagtgcaggcaactatggatgaacgaaatagacagatcgctgagataggtgcctc
 0 ++++++
 3' aatagatgtgctgcccctcagtcgcttgatacctacttgctttatctgtctagcgactctatccacggag
 0
 0
 0

1050

Ap

5' actgattaagcattggtaactgtcagaccaagtttactcatatatacttttagattgatttaaacttcat
 0 ++++++
 3' tgactaattcgtgaaccattgacagtcctggttcaaagtatgtagtataatgaaatctaactaaatttgaagta
 0
 0
 0

1120

Ap

5' ttttaatttaaaaggatctaggtgaagatccttttgataatctcatgaccaaatacccttaacgtgagt
 0 ++++++
 3' aaaattaaattttcctagatccacttctaggaaaaactattagagtactggtttagggaattgcactca
 0
 0
 0

1190

5' tttcgttccactgagcgtcagaccccgtagaaaagatcaaaggatcttcttgagatcctttttctgcg
 0 ++++++
 3' aaagcaaggtgactcgcagtcctggggcatctttctagtttctagaagaactctaggaaaaaagacgc
 0
 0
 0

1260

Ori

BGH89_B01a-pET16-DEST

5' cgtaatctgctgcttgcaaacaaaaaaaccaccgctaccagcgggtggtttggttgccggatcaagagcta
 1330
 3' gcattagacgacgaacgtttgttttttggggcgatggtcgccaccaaacaaacggcctagttctcgat

Ori

5' ccaactcttttccgaaggtaactggcttcagcagagcgcagataccaaatactgtccttctagtgtagc
 1400
 3' ggttgagaaaaaggcttccattgaccgaagtcgtctcgcgtctatggtttatgacaggaagatcacatcg

Ori

5' cgtagttaggccaccacttcaagaactctgtagcaccgcctacatacctcgctctgctaactctgttacc
 1470
 3' gcatcaatccgggtggtgaagtcttgagacatcgtggcggatgtatggagcgcgagacgattaggacaatgg

Ori

5' agtggctgctgccagtggcgataagtcgtgtcttaccgggttgactcaagacgatagttaccggataag
 1540
 3' tcaccgacgacggtcaccgctattcagcacagaatggcccaacctgagttctgctatcaatggcctattc

Ori

5' ggcgacggtcgggctgaacggggggttcgtgcacacagcccagcttgagcgaacgacctacaccgaac
 1610
 3' cgcgctgccagcccgacttgcccccaagcacgtgtgctcgggtcgaacctcgcttgcctggatgtggcttg

Ori

5' tgagatacctacagcgtgagctatgagaaagcggccagcttcccgaagggagaaaggcggacaggtatcc
 1680
 3' actctatggatgtcgcactcgatactctttcgcgggtgcgaagggttccctctttccgcctgtccatagg

Ori

5' ggtaagcggcagggtcggaacaggagagcgcacgaggagcttccaggggaaacgcctggatatctttat
 1750
 3' ccattcgcctccagccttgtcctctcgcgtgctccctcgaagggtcccccttgcggaccatagaaata

Ori

5' agtcctgtcgggtttcggccactctgacttgagcgtcgatttttgtgatgctcgtcaggggggaggagcc
 1820
 3' tcaggacagcccaaagcgggtggagactgaactcgcagctaaaaacactacgagcagtcccccgcctcgg

Ori

Pcil

5' tatggaaaaacgccagcaacgcggcctttttacgggttcttggccttttgccttttgcctcacatggt
 1890
 3' ataccttttgcggctggtgcgccggaaaaatgccaaggaccggaaaaacgaccggaaaaacgagtgtaaa

Ori

5' ctttcctgcgttatcccctgattctgtggataaccgtattaccgcctttgagtgagctgataaccgctcgc
 1960
 3' gaaaggacgcaataggggactaagacacctattggcataatggcggaaactcactcgactatggcgagcg

o **PshAI**
|
5' ggcgacgatagtcattgccccgcgcccaccggaaggagctgactgggttgaaggctctcaagggcatcggtc 3710
o +-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
3' cgctgctatcagtacggggcgcggtggccttctctcgactgacccaacttccgagagttcccgtagccag

o
5' gagatcccgggtgcctaataatgagtgagctaacttacattaattgcggttgcgctcactgcccgctttccagtc 3780
o +-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
3' ctctagggccacggattactcactcgattgaatgtaattaacgcaacgcgagtgacggggcgaaagggtcag

o **Lac I**
←-----
o

5' gggaaacctgtcgtgccagctgcattaatgaatcggccaacgcgcggggagagggcgtttgcgtattggg 3850
o +-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
3' cccttgacacgacgggtcgacgtaattacttagccggttgcgcgccctctccgccaacgcataacc

o **Lac I**

o

5' cgccaggggtggtttttctttcaccagtgagacgggcaacagctgattgccttcaccgcctggccctga 3920
o +-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
3' gcggtcccacccaaaagaaaagtggtcactctgcccgttgtcgactaacgggaagtggcggaccgggact

o **Lac I**

o

5' gagagttgcagcaagcgggtccacgctgggttgccccagcaggcgaaaatcctgtttgatgggtggttaacg 3990
o +-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
3' ctctcaacgctcgttcgccaggtgcgaccaaacggggtcgtccgcttttaggacaaactaccaccaattgc

o **Lac I**

o

5' gcgggatataaacatgagctgtcttcggtatcgtcgatatcccactaccgagatatccgcaccaacgcgcag 4060
o +-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
3' cgccctatattgtactcgacagaagccatagcagcataggggatggctctataggcgtggttgcgcgctc

o **Lac I**

o

5' cccggactcggtaatggcgcgcattgcgcccagcggccatctgatcgttggcaaccagcatcgcagtgggga 4130
o +-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
3' gggcctgagccattaccgcgcgtaacgcgggtcgcggtagactagcaaccggttggcgtagcgtcacct

o **Lac I**

o

5' acgatgccctcattcagcatttgcattggttggtaaaaccggacatggcactccagtcgccttcccgtt 4200
o +-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
3' tgctacgggagtaagtcgtaaacgtaccaaacactttggcctgtaccgtgaggtcagcgaagggcaa

o **Lac I**

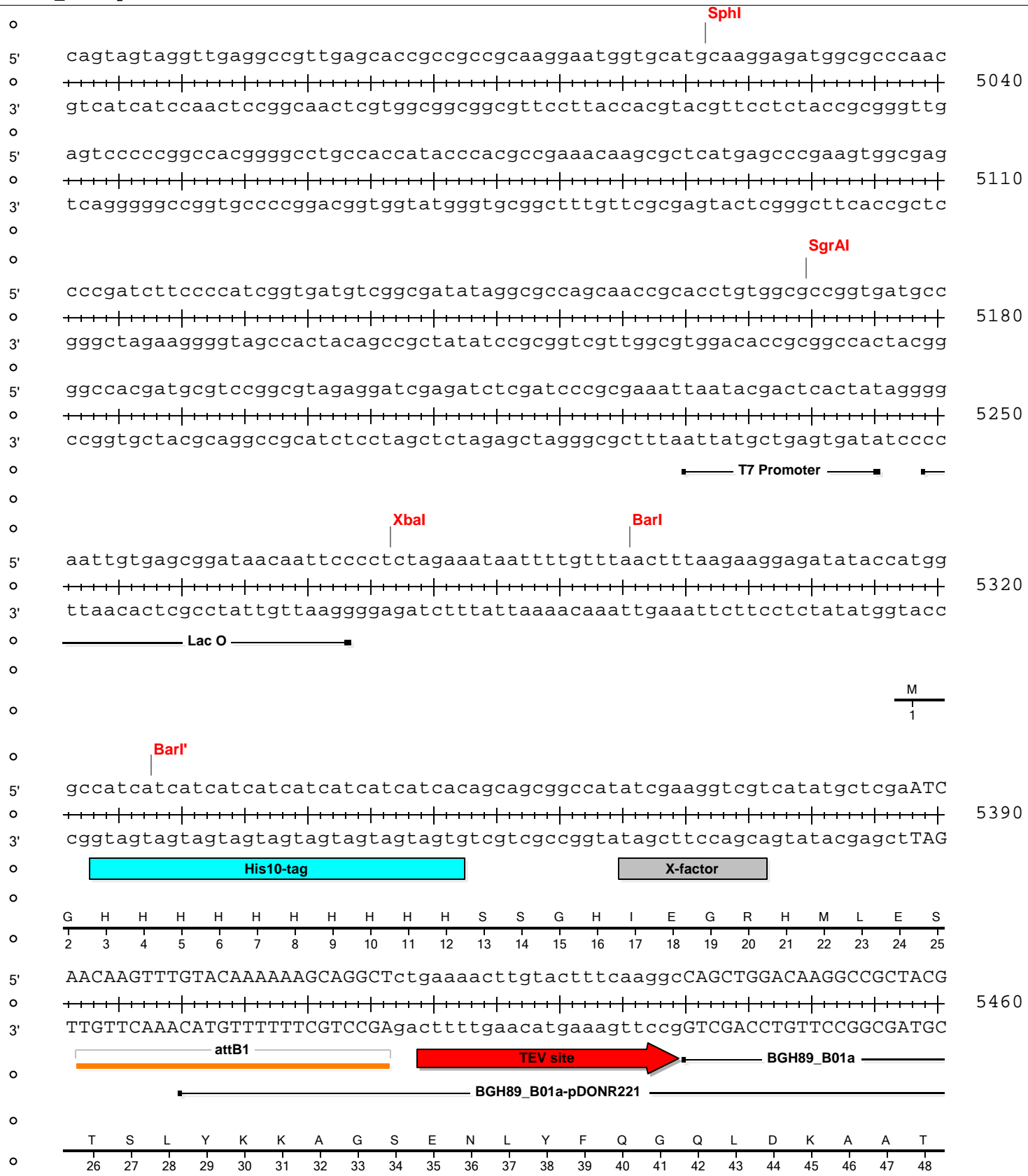
o

5' ccgctatcggctgaatttgattgcgagtgagatatttatgccagccagccagacgcagacgcgcccagac 4270
o +-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
3' ggcgatagccgacttaaacactaacgtcactctataaacggtcggtcggtctgcgtctgcgcggtctctg

o **Lac I**

o

o
5' agaacttaatgggcccgctaacagcgcgatttgcctggtgacccaatgcgaccagatgctccacgcccagt 4340
o
3' tcttgaattaccggcgattgtcgcgctaaacgaccactgggttacgctggtctacgaggtgcggggtca
o
Lac I
o
5' cgcgtaccgtcttcatgggagaaaataataactggtgatgggtgctctggtcagagacatcaagaaataacg 4410
o
3' gcgcatggcagaagtaccctcttttattatgacaactaccacagaccagtctctgtagttctttattgc
o
Lac I
o
5' ccggaacattagtgaggcagcttccacagcaatggcatcctgggtcatccagcggatagttaatgatcag 4480
o
3' ggccttgtaatcacgtccgtcgaagggtgctggtaccgtaggaccagtaggtcgccatcaataactagtc
o
Lac I
o
o
o
o
5' cccactgacgcgtgcgcgagaagattgtgcaccgcccgtttacaggcttcgacgccgcttcgttctacc 4550
o
3' ggggtgactgcgcaacgcgctcttctaacacgtggcgggcgaatgtccgaagctgcgggcgaagcaagatgg
o
Lac I
o
5' atcgacaccaccagctggcaccagttgatcggcgcgagatttaatcgccgcgacaatttgcgacggcg 4620
o
3' tagctggtggtgctgacccgtgggtcaactagccgcgctctaaattagcggcgctgttaaaccgtgccgc
o
Lac I
o
5' cgtgcagggccagactggaggtggcaacgccaatcagcaacgactgtttgcccgccagttggtgtgccac 4690
o
3' gcacgtcccggctgacctccaccgttgccggttagtcggtgctgacaaacgggcggtcaacaacacggtg
o
Lac I
o
5' gcggttgggaatgtaattcagctccgccatcgccgcttccactttttcccgcggttttcgcagaaacgtgg 4760
o
3' cgccaacccttacattaagtgcgagggcggtagcggcgaaggtgaaaaagggcgcaaaagcgtctttgcacc
o
Lac I
o
5' ctggcctggttcaccacgcgggaaacggctctgataagagacaccggcatactctgcgacatcgtataacg 4830
o
3' gaccggaccaagtgggtgcgccctttgccagactattctctgtggccggtatgagacgctgtagcatattgc
o
5' ttactggtttcacattcaccacctgaattgactctcttccgggcgctatcatgccataccgcgaaaggt 4900
o
3' aatgaccaagtgtgaagtgggtgggacttaactgagagaaggcccgcatagtagcggatggcgctttcca
o
5' tttgcgccattcgatgggtgtccgggatctcgacgctctcccttatgcgactcctgcattaggaagcagcc 4970
o
3' aaacgcggttaagctaccacagccctagagctgcgagaggggaatacgtgaggacgtaatccttcgctcgg
o



G H H H H H H H H H S S G H I E G R H M L E S
 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25

5' AACAAAGTTTGTACAAAAAAGCAGGCTctgaaaacttgtactttcaaggcCAGCTGGACAAGGCCGCTACG
 3' TTGTTCAAACATGTTTTTTCGTCCGAgacttttgaacatgaaagttccgGTCGACCTGTTCCGGCGATGC

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

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5'  GAGGCGTTTTTGTAAAAGGGTAGTAAAGGACAGGGCTACCGCATTTACCTGCGAATACCTGCCTGCGGATA
o  ++++++|+++++|+++++|+++++|+++++|+++++|+++++|+++++|+++++|+++++|+++++|+++++|
3'  CTCCGCAAAACTTTTCCCATCATTTCTCTGCCGATGGCGTAAATGGACGCTTATGGACGGACGCCTAT

```

5530

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E A F L K R V V K D R A T A F T C E Y L P A D
 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71

```

5'  ACGGAAAGGATGTATTTGAAATAGAAAGTAACGGCAGCCGTATTATGTTGCGCGAAACAACGGCGTGAG
o  ++++++|+++++|+++++|+++++|+++++|+++++|+++++|+++++|+++++|+++++|+++++|
3'  TGCCTTTCCTACATAAACTTTATCTTTTCATTGCCGTCGGCATAATACAACGCGCCTTTGTTGCCGCACTC

```

5600

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N G K D V F E I E S N G S R I M L R G N N G V S
 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'  CGTAGCATCAGCATTGAACTACTATCTCAGAAATTACTGTAATTCAATCATTACCTGGAACGGCACCAAC
o  ++++++|+++++|+++++|+++++|+++++|+++++|+++++|+++++|+++++|+++++|+++++|
3'  GCATCGTAGTCGTAACCTTGATGATAGAGTCTTTAATGACATTAAGTTAGTAATGGACCTTGCCGTGGTTG

```

5670

BGH89_B01a

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V A S A L N Y Y L R N Y C N S I I T W N G T N
 96 97 98 99 100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118

Acc65I
 |
 KpnI
 |

```

5'  CTGCACCTGCCGGCTGTATTGCCGGTTGTGAAAGAGAAAGAGCATCATGTGACGCCGTACAGGTACCGTT
o  ++++++|+++++|+++++|+++++|+++++|+++++|+++++|+++++|+++++|+++++|+++++|
3'  GACGTGGACGGCCGACATAACGGCCAACACTTTCTCTTCTCGTAGTACACTGCGGCATGTCCATGGCAA

```

5740

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L H L P A V L P V V K E K E H H V T P Y R Y R
 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141

```

5'  ATTATATCAACTACTGTACATTCCAGTACAGCATGAGCTGGTGGAACTGGGAGAGATGGCAGCAGGAAAT
o  ++++++|+++++|+++++|+++++|+++++|+++++|+++++|+++++|+++++|+++++|+++++|
3'  TAATATAGTTGATGACATGTAAGGTCATGTCGTACTIONGACCCTTGACCCTCTCTACCGTCGTCCTTTA

```

5810

BGH89_B01a

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Y Y I N Y C T F Q Y S M S W W N W E R W Q Q E I
 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165

BGH89_B01a-pET16-DEST

5' AGACTGGATGGCGATGAATGGTATTAACATGCCATTGGCGCTTACCGGTGAAGAAGCGATCTGGCAGGAA
 0 ++++++
 3' TCTGACCTACCGCTACTTACCATAATTGTACGGTAACCGCGAATGGCCACTTCTTCGCTAGACCGTCTCT

5880

BGH89_B01a

BGH89_B01a-pDONR221

D W M A M N G I N M P L A L T G E E A I W Q E
 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188

5' GTGTATAAAGAGATGGGCTTTACGGATGCAGAACTGGACAAGTTCTTCAGCGGACCCGCTTATTTCTCCT
 0 ++++++
 3' CACATATTTCTCTACCCGAAATGCCTACGTCTTGACCTGTTCAAGAAGTCGCCTGGGCGAATAAAGAGGA

5950

BGH89_B01a

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

NsiI

5' GGCTCTGGATGGGGAATATCGATGCATGGGGCGGTCCATTGCCACAACACTGGAAAGACAGCCATAAGGT
 0 ++++++
 3' CCGAGACCTACCCCTTATAGCTACGTACCCCGCCAGGTAACGGTGTGTGACCTTTCTGTTCGGTATTCCA

6020

BGH89_B01a

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W L W M G N I D A W G G P L P Q H W K D S H K V
 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' ATTACAGCAACAGATACTGGCCGCAGAACGTAGTATGGGTATGTTGCCAATATTACCAGCCTTTACCGGA
 0 ++++++
 3' TAATGTCGTTGTCTATGACCGGCGTCTTGCATCATAACCATAACAACGGTTATAATGGTCGGAAATGGCCT

6090

BGH89_B01a

BGH89_B01a-pDONR221

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

5' CACGTACCGCCAGCCTTTAAAGATAAATATCCGAATGAGATCGTAAAGCCGACTAACTGGGACGCTGGTT
 0 ++++++
 3' GTGCATGGCGGTCGGAAATTTCTATTTATAGGCTTACTCTAGCATTTTCGGCTGATTGACCCTGCGACCAA

6160

BGH89_B01a

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

BGH89_B01a-pET16-DEST

5' TCCCGGATGTATATATCCTCGATCCAAACAGTCCGATGTTTGACAAGATCGGGAAGAAGTTCCTGGAAGC
 0 ++++++
 3' AGGGCCTACATATATAGGAGCTAGGTTTGTTCAGGCTACAACTGTTCTAGCCCTTCTTCAAGGACCTTCG

6230

BGH89_B01a

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F P D V Y I L D P N S P M F D K I G K K F L E A
 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' ACAGACCAAAGCTTTTGGTACTGATCACCTTTTACTCAGCGGATACCTTCAATGAAAATGTGCCGCCTTCG
 0 ++++++
 3' TGTCTGGTTTCGAAAACCATGACTAGTGAAAATGAGTCGCCTATGGAAGTTACTTTTACACGGCGGAAGC

6300

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

5' AGCGATTCTTCATTCCTGGATGCCATGAGTCGTAAGGTATATGCGTCTATGGCAGCTGCTGATCCGAAAG
 0 ++++++
 3' TCGCTAAGAAGTAAGGACCTACGGTACTCAGCATTCCATATACGCAGATACCGTCGACGACTAGGCTTTC

6370

BGH89_B01a

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S D S S F L D A M S R K V Y A S M A A A D P K
 329 330 331 332 333 334 335 336 337 338 339 340 341 342 343 344 345 346 347 348 349 350 351

5' CCGTGTGGGTAATGCAGGGATGGATGTTCCATTATAATGCGAGTTACTGGCATCAGCCACAGATCAGAGC
 0 ++++++
 3' GGCACACCCATTACGTCCCTACCTACAAGGTAATATTACGCTCAATGACCGTAGTCGGTGTCTAGTCTCG

6440

BGH89_B01a

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A V W V M Q G W M F H Y N A S Y W H Q P Q I R A
 352 353 354 355 356 357 358 359 360 361 362 363 364 365 366 367 368 369 370 371 372 373 374 375

5' CTTGTAAATGCAGTGCCTGATGATCATATGATCGTACTGGATCTGTATAGTGAAAGTCATCCTGAATGG
 0 ++++++
 3' GAACAATTTACGTCACGGACTACTAGTATACTAGCATGACCTAGACATATCACTTTCAGTAGGACTTACC

6510

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L L N A V P D D H M I V L D L Y S E S H P E W
 376 377 378 379 380 381 382 383 384 385 386 387 388 389 390 391 392 393 394 395 396 397 398

CspCI

5' AGGAATACACAGGCTTATTACGGCAAACCATGGATCTGGAATATGCTGCACAACCTTTGGTGGTAATACCG
3' TCCTTATGTGTCCGAATAATGCCGTTTGGTACCTAGACCTTATAACGACGTGTTGAAACCACCATTATGGC

6580

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R N T Q A Y Y G K P W I W N M L H N F G G N T
399 400 401 402 403 404 405 406 407 408 409 410 411 412 413 414 415 416 417 418 419 420 421

CspCI'

5' GTATGTGGGGTGGAAATGGATGCCGCTGCACACGATCCGGCTACTGCGTTGCATGATCCTGCTTCCGGAAA
3' CATAACCCACCTTACCTACGGCGACGTGTGCTAGGCCGATGACGCAACGTACTAGGACGAAGGCCTTT

6650

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G M W G G M D A A A H D P A T A L H D P A S G K
422 423 424 425 426 427 428 429 430 431 432 433 434 435 436 437 438 439 440 441 442 443 444 445

5' GATGTCGGGTATTGGTCTGACGCCGAGGGCATTGAGCAGAATCCTGCGCTGTACCAGCTGATGATTGAT
3' CTACAGCCCATAACCAGACTGCGGCCTCCGTAACTCGTCTTAGGACGCGACATGGTCGACTACTAACTA

6720

BGH89_B01a

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M S G I G L T P E G I E Q N P A L Y Q L M I D
446 447 448 449 450 451 452 453 454 455 456 457 458 459 460 461 462 463 464 465 466 467 468

5' AACGTTTGGAGAGATCAGCCGATCAACGTAGATACCTGGCTGCAATCGTATGCAAAACAACGATACGGTG
3' TTGCAAACCTCTCTAGTCGGCTAGTTGCATCTATGGACCGACGTTAGCATAACGTTTTGTTGCTATGCCAC

6790

BGH89_B01a

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N V W R D Q P I N V D T W L Q S Y A K Q R Y G
469 470 471 472 473 474 475 476 477 478 479 480 481 482 483 484 485 486 487 488 489 490 491

RsrII

5' CAGAGAATGAGGCAGTAAACAAGGCATGGCAGATCCTGTATCATACCGTGTATATTGGCGGTCCGACAGA
3' GTCTCTTACTCCGTCATTTGTTCCGTACCGTCTAGGACATAGTATGGCACATATAACCGCCAGGCTGTCT

6860

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A E N E A V N K A W Q I L Y H T V Y I G G P T E
492 493 494 495 496 497 498 499 500 501 502 503 504 505 506 507 508 509 510 511 512 513 514 515

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Ascl

5' AGGCGCGCCGGAATCGATCATTTGTTGCAAGACCAACACTGGATATCGCAGCAGAGAGAGTAAAGACCAAA
 3' TCCGCGCGGCCTTAGCTAGTAACAACGTTCTGGTTGTGACCTATAGCGTCGTCTCTCTCATTCTGTTT

6930

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G A P E S I I V A R P T L D I A A E R V K T K
 516 517 518 519 520 521 522 523 524 525 526 527 528 529 530 531 532 533 534 535 536 537 538

5' CTTGAATATGATCCTGCCAAAGTAGTACCGGCATGGGATCTCTTCATCAATGCAGCCGCACAGCTGAAGC
 3' GAACTTATACTAGGACGGTTTCATCATGGCCGTACCCTAGAGAAGTAGTTACGTCGGCGTGTCTGACTTCG

7000

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L E Y D P A K V V P A W D L F I N A A A Q L K
 539 540 541 542 543 544 545 546 547 548 549 550 551 552 553 554 555 556 557 558 559 560 561

5' CAACAGAAGGATTTAAGTATGACCTGGTAGACCTGACCCGTCAGGTGCTTGGTAACTATGCCAGTCCATT
 3' GTTGTCTTCTAAATTCATACTGGACCATCTGGACTGGGCAGTCCACGAACCATTGATACGGTTCAGGTAA

7070

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P T E G F K Y D L V D L T R Q V L G N Y A S P L
 562 563 564 565 566 567 568 569 570 571 572 573 574 575 576 577 578 579 580 581 582 583 584 585

5' ACAACAGCGTGTAGCGACTGCTTATCGCAATAAAGATCTGGCGGCATTTAAACAATACAGCACACAATTC
 3' TGTTGTCGCACATCGCTGACGAATAGCGTTATTTCTAGACCGCCGTAAATTTGTTATGTCGTGTGTTAAG

7140

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Q Q R V A T A Y R N K D L A A F K Q Y S T Q F
 586 587 588 589 590 591 592 593 594 595 596 597 598 599 600 601 602 603 604 605 606 607 608

5' ATCGGACTACTGGATGACATGGATATGCTGCTGGGGACTCAGGAAGGATTTCTATTGGGCAAATGGGTAA
 3' TAGCCTGATGACCTACTGTACCTATACGACGACCCCTGAGTCCTTCCTAAAGATAACCCGTTTACCCATT

7210

BGH89_B01a

BGH89_B01a-pDONR221

I G L L D D M D M L L G T Q E G F L L G K W V
 609 610 611 612 613 614 615 616 617 618 619 620 621 622 623 624 625 626 627 628 629 630 631

BGH89_B01a-pET16-DEST

5' GCGATGCGCGCAGTAATGGTATTACGCCGGCAGAGCAGGACCTGTATGAGTTCAATGCAAAAGACCTGGT
 +-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
 3' CGCTACGCGCGTCATTACCATAATGCGGCCGTCTCGTCCTGGACATACTCAAGTTACGTTTTCTGGACCA

7280

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S D A R S N G I T P A E Q D L Y E F N A K D L V
 632 633 634 635 636 637 638 639 640 641 642 643 644 645 646 647 648 649 650 651 652 653 654 655

5' GACCTTGTGGGGGATAAGGATAGTCCGGTACACGAATATTCAAACCGTCAGTGGAACGGGCTGATTTAA
 +-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
 3' CTGGAACACCCCCCTATTCCATCAGGCCATGTGCTTATAAGTTTGGCAGTCACCTTGCCCGACTAATTT

7350

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T L W G D K D S P V H E Y S N R Q W N G L I K
 656 657 658 659 660 661 662 663 664 665 666 667 668 669 670 671 672 673 674 675 676 677 678

5' GGCTTTTATAAGCCTCGTTGGCAGCAGTTCTTCACTTTGCTGGAGTCCAGCCTCAAAAAGGGCGAAACAG
 +-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
 3' CCGAAAATATTCGGAGCAACCGTCGTCAAGAAGTGAAACGACCTCAGGTCCGAGTTTTTCCCGCTTTGTC

7420

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G F Y K P R W Q Q F F T L L E S S L K K G E T
 679 680 681 682 683 684 685 686 687 688 689 690 691 692 693 694 695 696 697 698 699 700 701

5' CCGATTTAAAGGCATTTGAAGAGCAGGTGAAGGCATTTGAGTGGAAATGGGCGAACGGGCATGATAAATA
 +-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
 3' GGCTAAATTTCCGTAAACTTCTCGTCCACTTCCGTAAACTCACCTTTACCCGCTTGCCCGTACTATTTAT

7490

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A D L K A F E E Q V K A F E W K W A N G H D K Y
 702 703 704 705 706 707 708 709 710 711 712 713 714 715 716 717 718 719 720 721 722 723 724 725

5' TGCCGTAAGCCACAGGGAGACGCCGTGAAAGCTGCCGTTCAATTACACAAGAAATATCGTAAGATGATG
 +-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
 3' ACGGCATTTCCGGTGTCCCTCTGCGGCACCTTTCGACGGCAAGTTAATGTGTTCTTTATAGCATTTCTACTAC

7560

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A V K P Q G D A V K A A V Q L H K K Y R K M M
 726 727 728 729 730 731 732 733 734 735 736 737 738 739 740 741 742 743 744 745 746 747 748

BGH89_B01a-pET16-DEST

o
 5' TAGGACCCAGCTTTCTTGTAACAAGTGGTTGATt**c**gaggatccggctgctaacaagcccgaaaggaagc 7630
 o
 3' ATCCTGGGTCGAAAGAACATGTTTCACCAACTAagctcctaggccgacgattgtttcgggcttctcctcg

BamHI

attB2

— BGH89_B...ONR221 —

749

o
 5' tgagtggctgctgccaccgctgagcaataactagcataacccttggggcctctaaacgggtcttgagg 7700
 o
 3' actcaaccgacgacggtggcgactcgttattgatcgtattggggaaccccgagatttgcccagaactcc

BspI

T7 Terminator

o
 5' ggtttttggctgaaaggaggaactatatccggatatcccgcaagaggcccgagcagtagccgataaccaa 7770
 o
 3' ccaaaaaacgactttcctccttgatataggcctatagggcgttctccgggcccgtcatggccgattgggt

— T7 T...ator —

o
 5' gcctatgcctacagcatccagggtgacggtgccgaggatgacgatgagcgcattgttagatttcatacac 7840
 o
 3' cggatacggatgctgtaggtcccactgccacggctcctactgctactcgcgtaacaatctaaagtatgtg

o
 5' ggtgcctgactgctgtagcaatttaactgtgataaactaccgcattaaagcttatcgatgataagctgtc 7910
 o
 3' ccacggactgacgcaatcgttaaattgacactatcctgatggcgtaatttcgaatagctactattcgacag

EcoRI

o
 5' aaacatgagaa 7921
 o
 3' tttgtactctt