

BGT03_T01a-pET32-DEST

5' g gat ga ac g aa at a ga ca ga t c g ct g a ga t a g g t g c ct c a ct g a t t a a g c a t t g g t a a c t g t c a g a c c a a
 1470
 3' c c t a c t t g c t t t a t c t g t c t a g c g a c t c t a t c c a c g g a g t g a c t a a t t c g t a a c c a t t g a c a g t c t g g t t
 Ap

5' g t t t a c t c a t a t a t a c t t t t a g a t t g a t t t a a a a c t t c a t t t t t a a t t t a a a a g g a t c t a g g t g a a g a t c c
 1540
 3' c a a t g a g t a t a t a t g a a a t c t a a c t a a a t t t t g a a g t a a a a t t a a a t t t t c c t a g a t c c a c t t c t a g g

5' t t t t t g a t a a t c t c a t g a c c a a a a t c c c t t a a c g t g a g t t t t c g t t c c a c t g a g c g t c a g a c c c c g t a g a
 1610
 3' a a a a c t a t t a g a g t a c t g g t t t t a g g g a a t t g c a c t c a a a a g c a a g g t g a c t c g c a g t c t g g g g c a t c t

5' a a a g a t c a a a g g a t c t t c t t g a g a t c c t t t t t t c t g c g c g t a a t c t g c t g c t t g c a a c a a a a a a c c a
 1680
 3' t t t c t a g t t t c c t a g a a g a a c t c t a g g a a a a a a g a c g c g c a t t a g a c g a c g a a c g t t t g t t t t t t t g g t
 Ori

5' c c g c t a c c a g c g g t g g t t t g t t t g c c g g a t c a a g a g c t a c c a a c t c t t t t t c c g a a g g t a a c t g g c t t c a
 1750
 3' g g c g a t g g t c g c c a c c a a a c a a a c g g c c t a g t t c t c g a t g g t t g a g a a a a g g c t t c c a t t g a c c g a a g t
 Ori

5' g c a g a g c g c a g a t a c c a a a t a c t g t c c t t c t a g t g t a g c c g t a g t t a g g c c a c c a c t t c a a g a a c t c t g t
 1820
 3' c g t c t c g c g t c t a t g g t t t a t g a c a g g a a g a t c a c a t c g g c a t c a a t c c g g t g g t g a a g t t c t t g a g a c a
 Ori

5' a g c a c c g c c t a c a t a c c t c g c t c t g e t a a t c c t g t t a c c a g t g g c t g c t g c c a g t g g c g a t a a g t c g t g t
 1890
 3' t c g t g g c g g a t g t a t g g a g c g a g a c g a t t a g g a c a a t g g t c a c c g a c g a c g g t c a c c g c t a t t c a g c a c a
 Ori

5' c t t a c c g g g t t g g a c t c a a g a c g a t a g t t a c c g g a t a a g g c g c a g c g g t c g g g c t g a a c g g g g g t t c g t
 1960
 3' g a a t g g c c c a a c c t g a g t t c t g c t a t c a a t g g c c t a t t c c g c g t c g c c a g c c c g a c t t g c c c c c a a g c a
 Ori

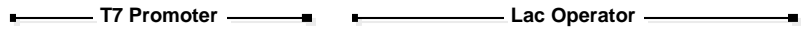
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 2030
 3' c g t g t g t c g g g t c g a a c c t c g c t t g c t g g a t g t g g c t t g a c t c t a t g g a t g t c g c a c t c g a t a c t c t t t c
 Ori

5' c g c c a c g c t t c c c g a a g g g a g a a a g g c g g a c a g g t a t c c g g t a a g c g g c a g g g t c g g a a c a g g a g a g c g c
 2100
 3' g c g g t g c g a a g g g c t t c c c t c t t t c c g c c t g t c c a t a g g c a t t c g c c g t c c c a g c c t t g t c c t c t c g c g
 Ori

o
 5' ccgcgaaattaatacgaactcactataggggaattgtgagcggataacaattcccctctagaataatttt
 o
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XbaI

5180

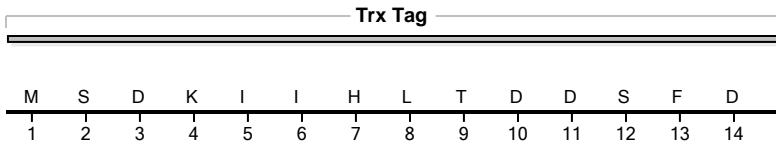


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BamHI

BamHI'

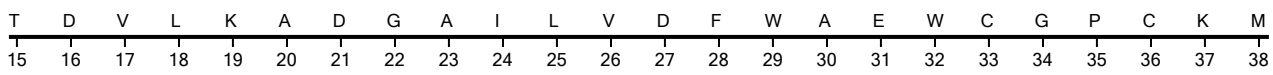
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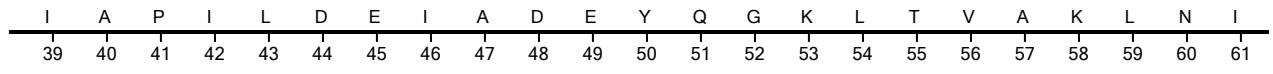
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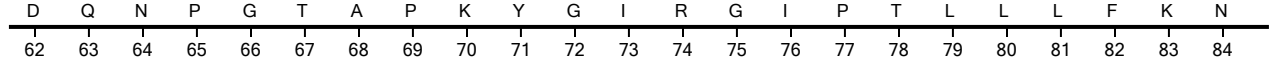
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5390



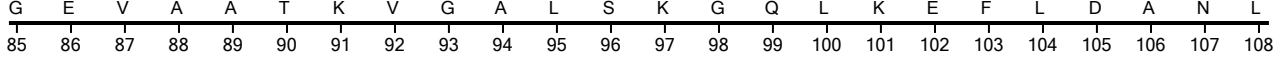
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5460

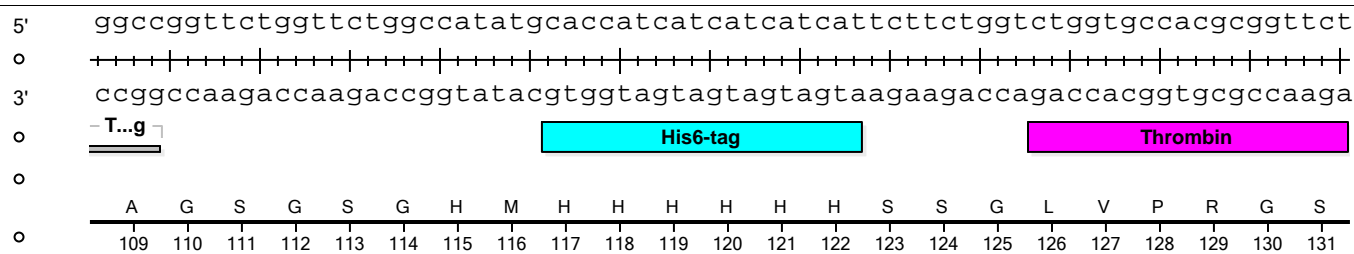


o
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 o
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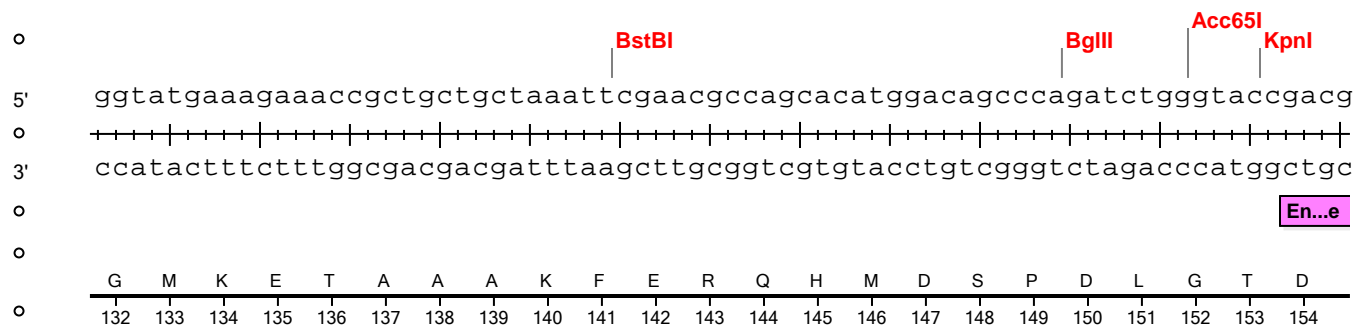
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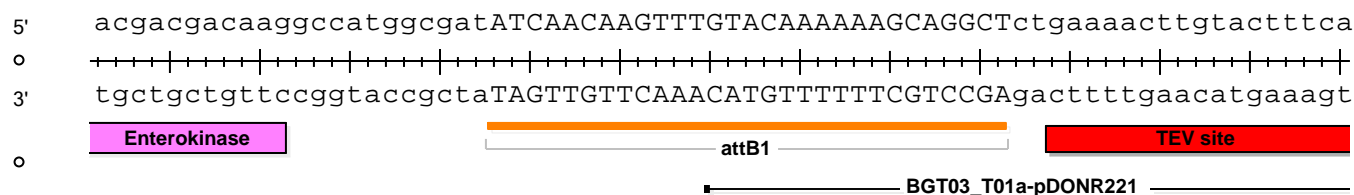
BGT03_T01a-pET32-DEST



5600



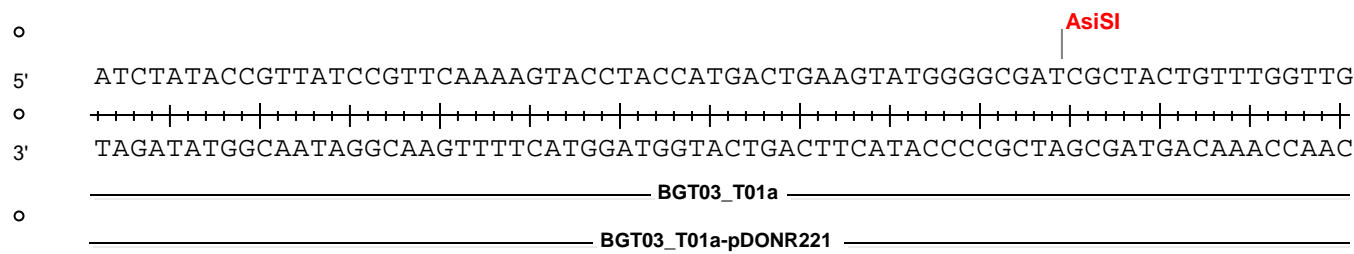
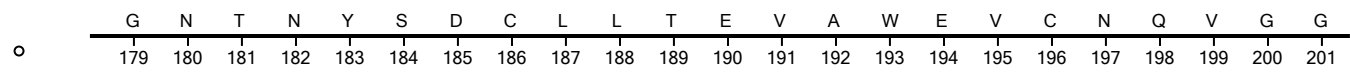
5670



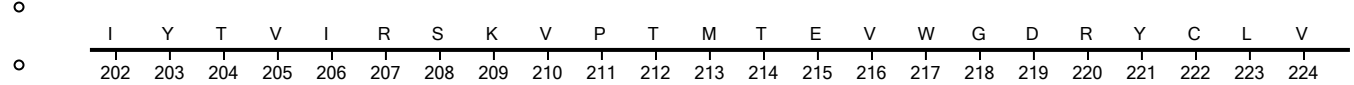
5740



5810



5880



BGT03_T01a-pET32-DEST

5' GACCGTATTTTCACAACAAAGCCATTGCTGAATTTGAAGCGATTGATACCTACGAAGCTGATGATGTTTT
 0 ++++++
 3' CTGGCATAAAAGTGTGTTGTTTCGGTAACGACTTAAACTTCGCTAACTATGGATGCTTCGACTACTACAAA

5950

BGT03_T01a

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G P Y F H N K A I A E F E A I D T Y E A D D V F
 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 240 241 242 243 244 245 246 247 248

5' TGCACAGGCTGTATTGAGAATGCGCAACTTAGGTTATGAGGTTTATTACGGACACTGGCTGGTATCAGGC
 0 ++++++
 3' ACGTGTCCGACATAACTCTTACGCGTTGAATCCAATACTCCAAGTAATGCCTGTGACCGACCATAGTCCG

6020

BGT03_T01a

BGT03_T01a-pDONR221

A Q A V L R M R N L G Y E V H Y G H W L V S G
 249 250 251 252 253 254 255 256 257 258 259 260 261 262 263 264 265 266 267 268 269 270 271

Agel

5' CGTCCGAAAGTTGTATTGATAAATCATTCTCTGCATTCTACCGGTTAGGTGAAATTAATAACAGCCTTT
 0 ++++++
 3' GCAGGCTTTCAACATAACTATTTAGTAAAGAGACGTAAGATGGCCAATCCACTTTAATTTATGTCGGAAA

6090

BGT03_T01a

BGT03_T01a-pDONR221

R P K V V L I N H F S A F Y R L G E I K Y S L
 272 273 274 275 276 277 278 279 280 281 282 283 284 285 286 287 288 289 290 291 292 293 294

5' GGGAAAACCACGGAATCTCAAGTCCGGAAGGGGATGACCTGTTAAATCAGGTAATTGCTTTTGGTTTCCT
 0 ++++++
 3' CCCTTTTGGTGCCTTAGAGTTCAGGCCTTCCCCTACTGGACAATTTAGTCCATTAACGAAAACCAAAGGA

6160

BGT03_T01a

BGT03_T01a-pDONR221

W E N H G I S S P E G D D L L N Q V I A F G F L
 295 296 297 298 299 300 301 302 303 304 305 306 307 308 309 310 311 312 313 314 315 316 317 318

5' TGCAAAGGTGTTCCATCAGCAATTGGATGAAACAAAAGGAGAACTTCCATGTGTATCTCATTTCCACGAA
 0 ++++++
 3' ACGTTTCCACAAGGTAGTCGTTAACCTACTTTGTTTTCTCTTGAAGGTACACATAGAGTAAAGGTGCTT

6230

BGT03_T01a

BGT03_T01a-pDONR221

A K V F H Q Q L D E T K G E L P C V S H F H E
 319 320 321 322 323 324 325 326 327 328 329 330 331 332 333 334 335 336 337 338 339 340 341

BGT03_T01a-pET32-DEST

5' TGGATGACAGGTACAGCGATTCCTGAAATGCGCCGCGAACATGTAAAAACATCTATTGTATTTACAACCC
 0
 3' ACCTACTGTCCATGTTCGCTAAGGACTTTACGCGGCGCTTGTTACATTTTTGTAGATAACATAAATGTTGGG

6300

BGT03_T01a

BGT03_T01a-pDONR221

W M T G T A I P E M R R E H V K T S I V F T T
 342 343 344 345 346 347 348 349 350 351 352 353 354 355 356 357 358 359 360 361 362 363 364

5' ACGCCACCTTATTGGGCCGCTACCTGGCCATGAATGATCCGAATTTCTATGACAACCTTACCTTATTACGA
 0
 3' TGCGGTGGAATAACCCGCGGATGGACCGGTACTTACTAGGCTTAAAGATACTGTTGAATGGAATAATGCT

6370

BGT03_T01a

BGT03_T01a-pDONR221

H A T L L G R Y L A M N D P N F Y D N L P Y Y D
 365 366 367 368 369 370 371 372 373 374 375 376 377 378 379 380 381 382 383 384 385 386 387 388

5' TTGGAATAAAGAAGCGGTCAATTTTAATATCGAACCTGCAGTAAAAATAGAACGCGCTGCCGCACACGGC
 0
 3' AACCTTATTTCTTCGCCAGTTAAAATTATAGCTTGGACGTCATTTTTATCTTGC GCGACGGCGTGTGCCG

6440

BGT03_T01a

BGT03_T01a-pDONR221

W N K E A V N F N I E P A V K I E R A A A H G
 389 390 391 392 393 394 395 396 397 398 399 400 401 402 403 404 405 406 407 408 409 410 411

5' GCGAACGTATTTACAACCGTAAGTGAAGTAACAGCCCGTGAATGCCAGTCGTTACTGGGCAGAAACCCGG
 0
 3' CGCTTGCATAAATGTTGGCATTCACTTCATTGTTCGGGCACCTTACGGTCAGCAATGACCCGCTTTTGGGCC

6510

BGT03_T01a

BGT03_T01a-pDONR221

A N V F T T V S E V T A R E C Q S L L G R N P
 412 413 414 415 416 417 418 419 420 421 422 423 424 425 426 427 428 429 430 431 432 433 434

5' ACATGGTTTTGCCCAACGGTTTGAACATTGAACGTTTCACTGCCTTACACGAATTCAGAAATTTACACAA
 0
 3' TGTACCAAACGGTTGCCAACTTGTAACTTGCAAAGTGACGGAATGTGCTTAAGGTCTTAAATGTGTT

6580

BGT03_T01a

BGT03_T01a-pDONR221

D M V L P N G L N I E R F T A L H E F Q N L H K
 435 436 437 438 439 440 441 442 443 444 445 446 447 448 449 450 451 452 453 454 455 456 457 458

BGT03_T01a-pET32-DEST

5' AGAACATAAAGATCAGATCCATGAATTTGTGATCGGTCACTTTTTTCAAAGCTATACGTTTGACCTGGAT
 0 ++++++
 3' TCTTGTATTTCTAGTCTAGGTACTTAAACACTAGCCAGTGAAAAAAGTTTCGATATGCAAACCTGGACCTA

6650

BGT03_T01a

BGT03_T01a-pDONR221

E H K D Q I H E F V I G H F F Q S Y T F D L D
 459 460 461 462 463 464 465 466 467 468 469 470 471 472 473 474 475 476 477 478 479 480 481

5' AAGACCTTATACTTCTTTACTTCCGGAAGATATGAGTACAAGAATAAAGGCTTCGACATTACGCTTGAAG
 0 ++++++
 3' TTCTGGAATATGAAGAAATGAAGGCCTTCTATACTCATGTTCTTATTTCCGAAGCTGTAATGCGAACTTC

6720

BGT03_T01a

BGT03_T01a-pDONR221

K T L Y F F T S G R Y E Y K N K G F D I T L E
 482 483 484 485 486 487 488 489 490 491 492 493 494 495 496 497 498 499 500 501 502 503 504

PmeI

5' CGCTTGCCCCTTTAAACTGGAGATTAAAAGAAGAGAACACCGATAACAACGGTTGTGATGTTCTTTATTAC
 0 ++++++
 3' GCGAACGGGCAAATTTGACCTCTAATTTTCTTCTCTTGTGGCTATGTTGCCAACACTACAAGAAATAATG

6790

BGT03_T01a

BGT03_T01a-pDONR221

A L A R L N W R L K E E N T D T T V V M F F I T
 505 506 507 508 509 510 511 512 513 514 515 516 517 518 519 520 521 522 523 524 525 526 527 528

5' CAAGCAGCCATAACCATAACCATTAACCCGCAGGTATTACAATCACGCGCGGTAATGGAAGAGGTGAGAAGC
 0 ++++++
 3' GTTCGTCGGTATGGTATGGTAATTGGGCGTCCATAATGTTAGTGCGCGCCATTACCTTCTCCACTCTTCG

6860

BGT03_T01a

BGT03_T01a-pDONR221

K Q P Y H T I N P Q V L Q S R A V M E E V R S
 529 530 531 532 533 534 535 536 537 538 539 540 541 542 543 544 545 546 547 548 549 550 551

5' AACTGCGATGCAATTGTACAGCAGCTGGGCGATAAATTGTTTGAAGCGGCTGCATCCAGCGGCGACTTAA
 0 ++++++
 3' TTGACGCTACGTTAACATGTCGTCGACCCGCTATTTAACAACTTCGCCGACGTAGGTGCGCGCTGAATT

6930

BGT03_T01a

BGT03_T01a-pDONR221

N C D A I V Q Q L G D K L F E A A A S S G D L
 552 553 554 555 556 557 558 559 560 561 562 563 564 565 566 567 568 569 570 571 572 573 574

BGT03_T01a-pET32-DEST

Swal

5' AATTACCGGATTTAAATAAATTTGTAGACGAATACTGGAAGCTGCGTTTAAGAAGAACCTTGCTATCCTG
 3' TTAATGGCCTAAATTTATTTAAACATCTGCTTATGACCTTCGACGCAAATTCTTCTTGGAACGATAGGAC

7000

BGT03_T01a

BGT03_T01a-pDONR221

K L P D L N K F V D E Y W K L R L R R T L L S W
 575 576 577 578 579 580 581 582 583 584 585 586 587 588 589 590 591 592 593 594 595 596 597 598

5' GAAGTCGCATGAATTGCCAAAGGTTGTTACACACAATTTAGTGTACGACAATCAGGATGAAATTCTGAAC
 3' CTTTCAGCGTACTTAACGGTTTCCAACAATGTGTGTTAAATCACATGCTGTTAGTCTTACTTTAAGACTTG

7070

BGT03_T01a

BGT03_T01a-pDONR221

K S H E L P K V V T H N L V Y D N Q D E I L N
 599 600 601 602 603 604 605 606 607 608 609 610 611 612 613 614 615 616 617 618 619 620 621

5' TTCCTGAGACATTCCAATATGGTAAACAATGAACACGATAAAGTAAAAGTTGTTTATCACCCGGACTTCA
 3' AAGGACTCTGTAAGGTTATACCATTTGTTACTTGTGCTATTTTCATTTTCAACAAATAGTGGGCCTGAAGT

7140

BGT03_T01a

BGT03_T01a-pDONR221

F L R H S N M V N N E H D K V K V V Y H P D F
 622 623 624 625 626 627 628 629 630 631 632 633 634 635 636 637 638 639 640 641 642 643 644

5' TTGCAAGCACCAATCCCTTGTGTTGGCATGGAATACGGACAGTTTGTACGCGGTTGCCATTTAGGTGTGTT
 3' AACGTTTCGTGGTTAGGGAACAAACCGTACCTTATGCCTGTCAAACATGCGCCAACGGTAAATCCACACAA

7210

BGT03_T01a

BGT03_T01a-pDONR221

I A S T N P L F G M E Y G Q F V R G C H L G V F
 645 646 647 648 649 650 651 652 653 654 655 656 657 658 659 660 661 662 663 664 665 666 667 668

5' CCCAAGTTACTACGAACCATGGGGCTATACGCCGCTTGAATGTATGGCATCCGGTGTGCCTGCAATCACA
 3' GGGTTCAATGATGCTTGGTACCCCGATATGCGGCGAACTTACATAACCGTAGGCCACACGGACGTTAGTGT

7280

BGT03_T01a

BGT03_T01a-pDONR221

P S Y Y E P W G Y T P L E C M A S G V P A I T
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BGT03_T01a-pET32-DEST

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 3' AGGCTAAATAGGCCTAAGCCACTGATGCATAACTTTTTGTAAGGCTTATTACTCTTGTTCATAGATGC

7350

BGT03_T01a

BGT03_T01a-pDONR221

S D L S G F G D Y V L K N I P N N E N K G I Y
 692 693 694 695 696 697 698 699 700 701 702 703 704 705 706 707 708 709 710 711 712 713 714

5' TAACAAACCGCTTCCATAAGAGTTACCACGATGCTGCACAGCAGCTGGCAGACCAGATGTATCACTTTGT
 0
 3' ATTGTTGGCGAAGGTATTCTCAATGGTGCTACGACGTGTCGTCGACCGTCTGGTCTACATAGTAAACA

7420

BGT03_T01a

BGT03_T01a-pDONR221

V T N R F H K S Y H D A A Q Q L A D Q M Y H F V
 715 716 717 718 719 720 721 722 723 724 725 726 727 728 729 730 731 732 733 734 735 736 737 738

5' TCACCTCTCCCGCAGAGACCGTATAACGCAACGTAACAGAGTGGAGAGTGCATCCGAACATTTTGACTGG
 0
 3' AGTGGAGAGGGCGTCTCTGGCATATTGCGTTGCATTGTCTCACCTCTCACGTAGGCTTGAAAACCTGACC

7490

BGT03_T01a

BGT03_T01a-pDONR221

H L S R R D R I T Q R N R V E S A S E H F D W
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 0
 3' GTCTTGAATCCTTCGATAATACTATTTTCGCGTAGCAAACCGAAAGAGATAACGTCCTTGCGAATCCTGG

7560

BGT03_T01a

BGT03_T01a-pDONR221

Q N L G S Y Y D K A H R L A F S I A V N A .
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BamHI

EcoRI
SacI

Sall

HindIII

NotI
EagI

5' CAGCTTCTTGTACAAAGTGGTTGATatcggatccgaattcgagctccgtcgacaagcttgcgccgcac
 0
 3' GTCGAAAGAACATGTTTCACCAACTatagcctaggcttaagctcgaggcagctgttcgaacgccggcgtg

7630

attB2

BG...21

BGT03_T01a-pET32-DEST

PspXI
XhoI
AvaI
BmeT110I

o
o
o
o
o
o
o
o
o
o
o
o

5' tcgagcaccaccaccaccaccactgagatccggctgctaacaaagcccgaaggaagctgagttggctgc
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7700

BlnI

5' tgccaccgctgagcaataactagcataacccttggggcctcctaaacgggtcttgaggggttttttgctg
3' acggtggcgactcgttattgatcgtattggggaaccccggagattgcccagaactccccaaaaaacgac

7770

T7 Terminator

5' aaaggaggaactatatccggat
3' tttcctccttgatataggccta

7792