

o
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o
Lac I
o
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Lac I
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o
Lac I
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Lac I
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o

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 o
 3' tggcgtggacaccgcgccactacggccggtgctacgcaggccgcacatctcctagctctagctagagctag

5110

SgrAI

XbaI

o
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 o
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5180



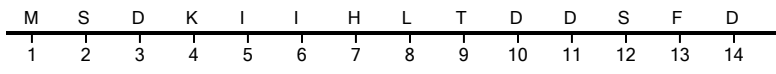
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5250

BamHI

BamHI

Trx Tag

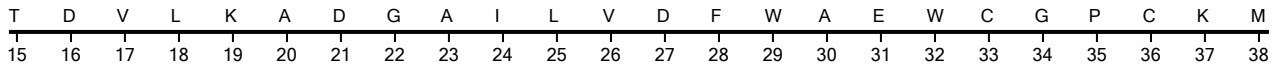


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5320

RsrII

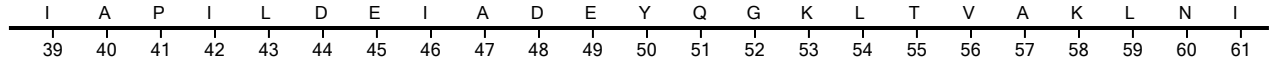
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5390

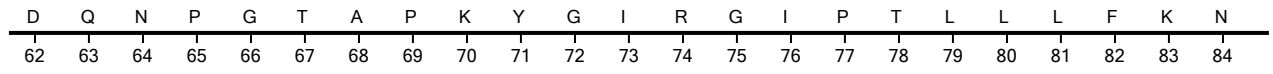
Trx Tag



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 o
 3' ctagttttgggaccgtgacgcggctttataccgtaggcaccatagggctgagacgacgacaagtttttgc

5460

Trx Tag



BGH02_B02c-pET32-DEST

5'	GGCGAGATCCGCACCGCGATCATGCTGCCGGGCGACGTGCACACGGCTCTGCACCGGGCAGGATTGATCC	
o	++++ ++++ ++++ ++++ ++++ ++++ ++++ ++++ ++++ ++++ ++++ ++++ ++++ ++++ ++++ ++++	5880
3'	CCGCTCTAGGCGTGCGCTAGTACGACGGCCCGCTGCACGTGTGCCGAGACGTGGCCCGTCCTAACTAGG	
	-----BGH02_B02c-----	
o	-----BGH02_B02c-pDONR221-----	
o		
	G E I R T A I M L P G D V H T A L H R A G L I	
o	202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220 221 222 223 224	
5'	CCGATCCCTATTTCCGGCCGAACGAGGAAAAGGTGCAGTGGGTCCGAGCGCAATGGGCGGTCGAGCG	
o	++++ ++++ ++++ ++++ ++++ ++++ ++++ ++++ ++++ ++++ ++++ ++++ ++++ ++++ ++++ ++++	5950
3'	GGCTAGGGATAAAGCCGGCGTTGCTCCTTTCCACGTCACCCAGCGGCTCGCGCTTACCCGCCAGCTCGC	
	-----BGH02_B02c-----	
o	-----BGH02_B02c-pDONR221-----	
o		
	P D P Y F G R N E E K V Q W V A E R E W A V E R	
o	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'	CAGCTTCGCGCTTCAGGAGGTCGAGGGCGACTGGTATCTCGATATCGATTATCTCGACACGGTTGCCAGC	
o	++++ ++++ ++++ ++++ ++++ ++++ ++++ ++++ ++++ ++++ ++++ ++++ ++++ ++++ ++++ ++++	6020
3'	GTCGAAGCGCGAAGTCCTCCAGCTCCCGCTGACCATAGAGCTATAGCTAATAGAGCTGTGCCAACGGTTCG	
	-----BGH02_B02c-----	
o	-----BGH02_B02c-pDONR221-----	
o		
	S F A L Q E V E G D W Y L D I D Y L D T V A S	
o	249 250 251 252 253 254 255 256 257 258 259 260 261 262 263 264 265 266 267 268 269 270 271	
5'	GTCCACGTCAACGGCTTTCTGGCGCTCGAAGCCGACAACAGCTTCCGCCGCTACCGGCCCGATGTCTCCA	
o	++++ ++++ ++++ ++++ ++++ ++++ ++++ ++++ ++++ ++++ ++++ ++++ ++++ ++++ ++++ ++++	6090
3'	CAGGTGCAGTTGCCGAAAGACCGCGAGCTTCGGCTGTTGTGCAAGGCGGCATGGCCGGGCTACAGAGGT	
	-----BGH02_B02c-----	
o	-----BGH02_B02c-pDONR221-----	
o		
	V H V N G F L A L E A D N S F R R Y R P D V S	
o	272 273 274 275 276 277 278 279 280 281 282 283 284 285 286 287 288 289 290 291 292 293 294	
5'	GCATGCTGAAATCAGGCGATAACAGCATCCGCATCGTCTTTGCCTCCAACATCGCTGTCCGGTGCCGCGCG	
o	++++ ++++ ++++ ++++ ++++ ++++ ++++ ++++ ++++ ++++ ++++ ++++ ++++ ++++ ++++ ++++	6160
3'	CGTACGACTTTAGTCCGCTATTGTCTAGGCGTAGCAGAAACGGAGGTTGTAGCGACAGCCACGGCGCGC	
	-----BGH02_B02c-----	
o	-----BGH02_B02c-pDONR221-----	
o		
	S M L K S G D N S I R I V F A S N I A V G A A R	
o	295 296 297 298 299 300 301 302 303 304 305 306 307 308 309 310 311 312 313 314 315 316 317 318	

BGH02_B02c-pET32-DEST

5' ACAGAAGCAGCAGCCCTTCTACATTCCCTACAGCACGGGCAACTCACCGATCCCCGACGGCAACATGCTG
+
3' TGTCTTCGTCGTCGGGAAGATGTAAGGGATGTCGTGCCCGTTGAGTGGCTAGGGGCTGCCGTTGTACGAC

6230

BGH02_B02c

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Q K Q Q P F Y I P Y S T G N S P I P D G N M L
319 320 321 322 323 324 325 326 327 328 329 330 331 332 333 334 335 336 337 338 339 340 341

5' CGCAAGCCGCAATGCCATTTTCGGCTGGGACTGGAACATCGCCATTGCCCGCTCGGTCTTTACGGAACGA
+
3' GCGTTCGGCGTTACGGTAAAGCCGACCCTGACCTTGTAGCGGTAACGGGGCGAGCCAGAAATGCCTTGCT

6300

BGH02_B02c

BGH02_B02c-pDONR221

R K P Q C H F G W D W N I A I A P L G L Y G 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' TCGCGCTGAAAAAGCTCGAAACGGCGCGCATCGAACACGTTCACCCGCCAGACCCACAATAATGACGG
+
3' AGCGCGACTTTTTTCGAGCTTTGCCGCGCGTAGCTTGTGCAGCAGTGGGCGGTCTGGGTGTTATTACTGCC

6370

BGH02_B02c

BGH02_B02c-pDONR221

I A L K K L E T A R I E H V V T R Q T H N N D G
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' TTCGGTCGACCTCAAAGTGACGGCGACGCTGTTTTCCAAGGGGCCAGACATTGCCAGGTCTATTTTCGAC
+
3' AAGCCAGCTGGAGTTTCACTGCCGCTGCGACAAAAGGTTCCCCGGTCTGTAACGGGTCCAGATAAAGCTG

6440

BGH02_B02c

BGH02_B02c-pDONR221

S V D L K V T A T L F S K G P D I A Q V Y F D
389 390 391 392 393 394 395 396 397 398 399 400 401 402 403 404 405 406 407 408 409 410 411

5' CTCGATGGCGAGCGCGTGCGCCTGGATGTCGGCGTCAATGGCGAGACCCATGTCAACCATCTCTTCCATA
+
3' GAGCTACCGCTCGCGCACGCGGACCTACAGCCGACGTTACCGCTCTGGGTACAGTTGGTAGAGAAGGTAT

6510

BGH02_B02c

BGH02_B02c-pDONR221

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

BGH02_B02c-pET32-DEST

5' TCGACAATCCGCGCCTCTGGTGGCCCTCCGGCAGCGGCGAGCAGGCGCTCTACAGGCTTTCGGTCAATT
 0 ++++++
 3' AGCTGTTAGGCGGAGACCACGGGAGGCCGTGCGCGCTCGTCCGCGAGATGTCCGAAAGGCAGCTTAA

6580

BGH02_B02c

BGH02_B02c-pDONR221

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

5' GCCGACGGATGAGGTGACCAAGCAGATCGGTCTTCGCACCATCGAGCTGATCACCACGCCGGATGCGGCC
 0 ++++++
 3' CGGCTGCCTACTCCACTGGTTCGTCTAGCCAGAAGCGTGGTAGCTCGACTAGTGGTGCGGCCTACGCCGG

6650

BGH02_B02c

BGH02_B02c-pDONR221

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

5' GGCAGCCGCTTTGCCTTCAAGGTCAACGGCCGCGAGATCTTTTGC CGCGGCCAACTGGATCCCGGCCG
 0 ++++++
 3' CCGTCGGCGAAACGGAAGTTCAGTTGCCGGCGCTCTAGAAAACGGCGCCGCGGTTGACCTAGGGCCGGC

6720

BGH02_B02c

BGH02_B02c-pDONR221

G S R F A F K V N G R E I F C R G A N W I P A
 482 483 484 485 486 487 488 489 490 491 492 493 494 495 496 497 498 499 500 501 502 503 504

BspMI

5' ACGCGCTGTTTTCGCTGTCTTCACCTGAGAAGACCGAAGACCTGCTGCAATCGGCCAAAGCCGCCAACAT
 0 ++++++
 3' TGCGCGACAAAAGCGACAGAAGTGGACTCTTCTGGCTTCTGGACGACGTTAGCCGTTTTCGGCGGTTGTA

6790

BGH02_B02c

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D A L F S L S S P E K T E D L L Q S A K A A N M
 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' GAACATGATCCGTGTCTGGGGCGGCGGCTTCTATGAGCAGGATCATTTCTACGATCTCTGCGACCGGCTG
 0 ++++++
 3' CTTGTACTAGGCACAGACCCCGCCGCCGAAGATACTCGTCCTAGTAAAGATGCTAGAGACGCTGGCCGAC

6860

BGH02_B02c

BGH02_B02c-pDONR221

N M I R V W G G G F Y E Q D H F Y D L C D R L
 529 530 531 532 533 534 535 536 537 538 539 540 541 542 543 544 545 546 547 548 549 550 551

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Nsil

5' TTACTGGTCCGGTCTGGCACGAGAACAAGTCGTTTCGACAATTACCGCTCGGTGCGTCCGCGCTTCTGCTCG
 3' AATGACCAGCCAGACCGTGTCTTTGTTTCAGCAAGCTGTTAATGGCGAGCCACGCAGGCGCGAAGACGAGC

7280

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Y W S V W H E N K S F D N Y R S V R P R F C S
 669 670 671 672 673 674 675 676 677 678 679 680 681 682 683 684 685 686 687 688 689 690 691

5' GAATTCGGCTTCCAGTCCTATACGTCGCTGCCTGTGATCAAGACCTATGCCGAGGCGAAAGACATGAACG
 3' CTTAAGCCGAAGGTCAGGATATGCAGCGACGGACACTAGTTCTGGATACGGCTCCGCTTTCTGTACTTGC

7350

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

BsmI

5' TCGCTTCCCCGGTCATGGAGCTGCACCAGAAGAATGCCGGCGGCAACGAGCGCATCGCCGGCAGATGTT
 3' AGCGAAGGGGCCAGTACCTCGACGTGGTCTTCTTACGGCCGCGTTGCTCGCGTAGCGGCCGTGCTACAA

7420

BGH02_B02c

BGH02_B02c-pDONR221

V A S P V M E L H Q K N A G G N E R I A G T M F
 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' CCGTTATTTCCGATTCCCCAAGGATTTCCCGAACTTCGTCTATCTCTCCCAGATCCAACAGGGGCTGGCG
 3' GGCAATAAAGGCTAAGGGGTTCCTAAAGGGCTTGAAGCAGATAGAGAGGGTCTAGGTTGTCCCCGACCGC

7490

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R Y F R F P K D F P N F V Y L S Q I Q Q G L A
 739 740 741 742 743 744 745 746 747 748 749 750 751 752 753 754 755 756 757 758 759 760 761

5' ATCAAGACGGCGGTGGAATACTGGCGGTTCGCTCAAACCCATTGCATGGGCACGATCTACTGGCAGCTCA
 3' TAGTTCTGCCGCCACCTTATGACCGCCAGCGAGTTTGGGGTAACGTACCCGTGCTAGATGACCGTCGAGT

7560

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5' ACGACACCTGGCCGGTCGCCTCCTGGTCGAGCCTCGACTATGGCGGCCGCTGGAAGGCGATGCACTATCT
 7630
 3' TGCTGTGGACCGGCCAGCGGAGGACCAGCTCGGAGCTGATACCGCCGGCGACCTTCCGCTACGTGATAGA

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N D T W P V A S W S S L D Y G G R W K A M H Y L
 785 786 787 788 789 790 791 792 793 794 795 796 797 798 799 800 801 802 803 804 805 806 807 808

5' CGTCAAGCGCTTCTTCCAGCCGGTCGCGGTCGCGGCCATTTCCTTCCGACGACGGAAAGACGATTCGCTTC
 7700
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V K R F F Q P V A V A A I P S D D G K T I R F
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5' TCGCTGGTCAACGACACGCTTGCCGATGTCAGCGTCGACCTTTCGATCTCGCTGCTGACGATGCAGGGCG
 7770
 3' AGCGACCAGTTGCTGTGCGAACGGCTACAGTCGCAGCTGGAAGCTAGAGCGACGACTGCTACGTCCC

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S L V N D T L A D V S V D L S I S L L T M Q G
 832 833 834 835 836 837 838 839 840 841 842 843 844 845 846 847 848 849 850 851 852 853 854

5' AACGCCGGCACCTGAGAGACGTACAGGCCATATGTTTCGCCGGATGCGGCCGTCCTGACCACGAGCATCGA
 7840
 3' TTGCGGCCGTTGACTCTCTGCATGTCCGGTATAACAAGCGCCTACGCCGGCAGTGACGGTGCTCGTAGCT

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E R R H L R D V Q A I C S P D A A V T A T S I D
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5' CGTTTCCGATATFCCCAGGGAAACGTTGCTTGCCTGGCGTTTACC CGCTCGAACGGCACGGGCGGCGAG
 7910
 3' GCAAAGGCTATAAGGGCTCCCTTGCAACGAACGGACCGCAAAGTGGCGCAGCTTGCCGTGCCCGCCGCTC

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V S D I P E G T L L A W R F T A S N G T G G E
 879 880 881 882 883 884 885 886 887 888 889 890 891 892 893 894 895 896 897 898 899 900 901

BGH02_B02c-pET32-DEST

5' GGGCACCATGTCAACGGTACCTACAAGGCGCTGGAGCTGGAACCCGCGGGGCTGACAGTCACCCACGAAT
 +-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
 3' CCCGTGGTACAGTTGCCATGGATGTTCCGCGACCTCGACCTGGGCGCCCCGACTGTCTAGTGGGTGCTTA

7980

BGH02_B02c

BGH02_B02c-pDONR221

G H H V N G T Y K A L E L E P A G L T V T H E
 902 903 904 905 906 907 908 909 910 911 912 913 914 915 916 917 918 919 920 921 922 923 924

5' ATGTCGAGGAGAATGGCTCGGTTCGACATCAACGTCACCGCGAAGGGACTTGCCTTTTTCGTGATGATCGA
 +-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
 3' TACAGTCCTCTTACCGAGCCAGCTGTAGTTGCAGTGGCGCTTCCCTGAACGCGAAAAGCACTACTAGCT

8050

BGH02_B02c

BGH02_B02c-pDONR221

Y V E E N G S V D I N V T A K G L A L F V M I E
 925 926 927 928 929 930 931 932 933 934 935 936 937 938 939 940 941 942 943 944 945 946 947 948

5' AACCGAGACCGACGGCAAATATTCGACAAACGCCTTCGATCTTGC GGCCGGCGAGAGCCGCCGCATCGCC
 +-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
 3' TTGGCTCTGGCTGCCGTTTATAAGGCTGTTGCGGAAGCTAGAACGCCGGCCGCTCTCGGCGGCGTAGCGG

8120

BGH02_B02c

BGH02_B02c-pDONR221

T E T D G K Y S D N A F D L A A G E S R R I A
 949 950 951 952 953 954 955 956 957 958 959 960 961 962 963 964 965 966 967 968 969 970 971

5' TTTACCCCGGCACGGCCGCTCGATCGTGGCGCGCTTCCGGAGTTCCGGTTCTACGACCTGTATTCTCGCC
 +-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
 3' AAATGGGGCCGTGCCGGCGAGCTAGCACCGCGCGAAGGCCTCAAGGCCAAGATGCTGGACATAAGGACGG

8190

BGH02_B02c

BGH02_B02c-pDONR221

F T P A R P L D R G A L P E F R F Y D L Y S C
 972 973 974 975 976 977 978 979 980 981 982 983 984 985 986 987 988 989 990 991 992 993 994

5' AGTCGGCGGATTAGGACCCAGCTTTCTTGTACAAAGTGGTTGATatcggatccgaattcgagctccgctcg
 +-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
 3' TCAGCCGCCTAATCCTGGGTGCGAAAGAACATGTTTACCAACTAtagcctaggcttaagctcgagggcagc

8260

EcoICRI
SacI

BGH02_B02c

attB2

BGH02_B02c-pDONR221

Q S A D
 995 996 997 998 999

HindIII

PspXI
XhoI

5' acaagcttgcggccgcactcgcgaccaccaccaccactgagatccggctgctaacaaagcccgaaa
 +-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
 3' tgttcgaacgccggcgtgagctcgtggtggtggtggtgactctaggccgacgattgtttcgggcttt

8330

