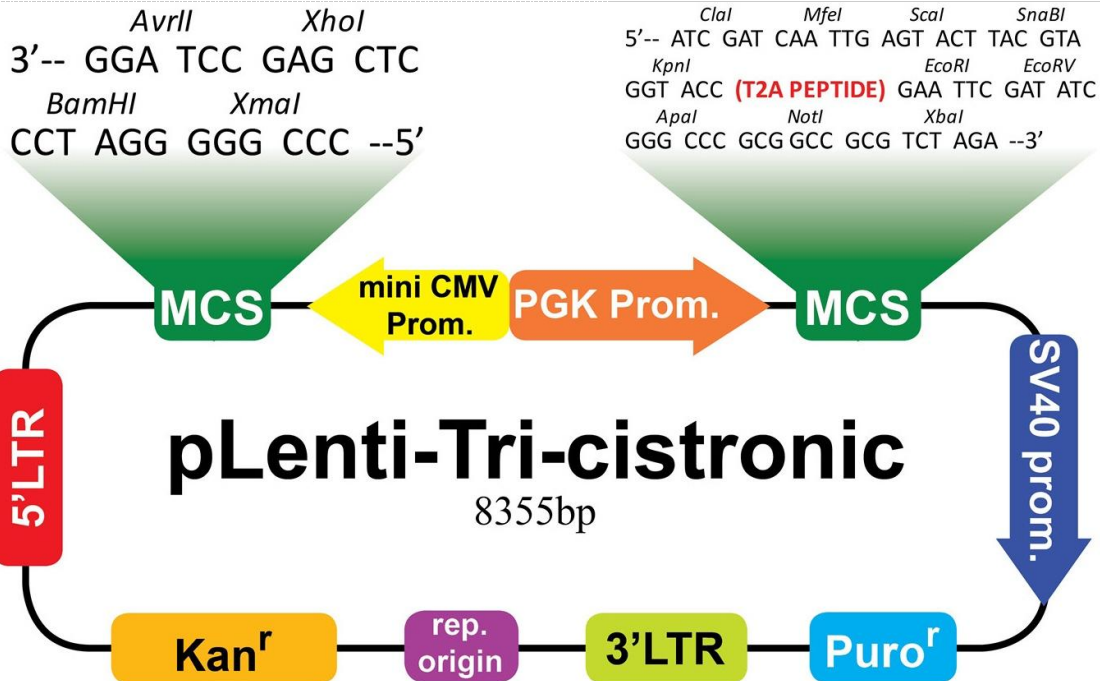


LV038

Vector Name	pLenti-Tri-cistronic
VectorType	Lentivirus
Antibiotic Information	Puromycin



Sequence

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Genebank

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Text Map

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RRE reg (1557,1790)>>>

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1981 gaacaagaattattggaatagataaaatgggcaagtttgggaattggtttaaataaaca 2040
CTGTGTTCTTAATAACCTTAATCTATTACCCGTTCAAACACCTTAACCAATTTGATTGTT

2041 aattggctgtggtatataaaatattcataatgatagtaggagccttggtaggtttaaaga 2100
TTAACCGACACCATATATTTAATAAGTATTACTATCATCTCCGACCATCCAAATTC

2101 atagtttttctgtactttctatagtgaaatagagtaggagcagggatattaccattatcg 2160
TATCAAAAACGACATGAAAGATATCACTTATCTCAATCCGTCCTATAAGTGGTAATAGC

2161 ttcagaccacctcccaaccccgaggggaccgacagggcccgaaggaatagaagaagaa 2220
AAAGTCTGGGTGGAGGGTTGGGGCTCCCTGGGCTGTCGGGGCTTCTTATCTTCTCTT

2221 ggtggagagagagacagagacagatccattcgattagtgaaacggatctcgacggatcga 2280
CCACCTCTCTCTGTCTCTGTCTAGGTAAGCTAATCACTTGCCCTAGAGCTGCCATAGCT

2281 aagcttgggattcgaattttaaagaaaagggggattgggggtacagtgaggggaaag 2340
TTCGAACCCCTAAGCTTAAATTTCTTTTCCCCCTAACCCCATGTCAGTCCCTTTTC

2341 aaatagtagacataatgcaacagacatacaaaactaagaactacaaaacaaattacaaa 2400
TTATCATCTGTATTATCGTTGTCTGTATGTTGATTCTTGATGTTTTGTTAATGTTT

2401 aattcaaaaatttctgggtttttcgaacctagcagacgtcggcagtgaaaaaatgcttta 2460
TTAAGTTTAAAAGCCCAAAAAGCTTGGATCGTCTGCAGCCCTCACTTTTTTACGAAAT

2461 tttgtgaaatttctgtatgctattgtcttatttgaaccattataagctgcaataaacaag 2520
AAACACTTTAAACACTACGATAACGAAATAAACATTTGGTAATATTCGACGTTATTGTTT

2521 ttaacaacaagaattgcattcattttatgtttcaggttcagggggaggtgtgggaggtt 2580
AATTGTGTTCTTAACGTAAGTAAATAACAAGTCCAAGTCCCCCTCCACACCTCCAAA

XhoI

2581 tttaaagcaagtaaaacctctacaatgtggatggctgattatgatctcacctaggctc 2640
AAATTCGTTTCAATTTGGAGATGTTTACACCATACCGACTAATACTAGAGTGGATCCGAG

SmaI

BamHI XmaI

2641 gagggatccccgggggatctgacggttcaactaaacagagctctgcttataatagcctccc 2700
CTCCCTAGGGGGCCCGCTAGACTGCCAAGTGATTTGCTCGAGACGAATATATCCGGAGGG

PGK Prom. (2723,3236)>>>

miniCMV Prom. (2722,2656)<<<

2701 accgtacacgccacctcgacataaaattctaccgggtaggggagggcgttttcccaaggca 2760
TGGCATGTGCGGTGGAGCTGTATTTAAGATGGCCATCCCTCCGCGAAAAGGGTCCGT

2761 gtctggagcatgcgcttttagcagccccgctgggcaacttggcgtacacaagtggcctctg 2820
CAGACCTCGTACGCGAAATCGTCGGGGCGACCCGTGAACCGCATGTGTTACCGGAGAC

```

2821 gcctgcacacattccacatccaccgtaggcgccaaccggtccgttctttggtggccc 2880
    CGGAGCGTGTGTAGGTGTAGGTGGCCATCCGCGGTGGCCGAGGCAAGAAACACCGGG

2881 cttcgcgccaccttctactcctcccctagtcaggaagttccccccgccccgcagctcgc 2940
    GAAGCGCGGTGGAAGATGAGGAGGGGATCAGTCCTTCAAGGGGGGGCGGGCGTCGAGCG

2941 gtcgtgcaggacgtgacaaatggaagtagcagctctcaactagctcgtcagatggacag 3000
    CAGCACGTCCTGCACGTGTTACCTTCATCGTGCAGAGTGATCAGAGCACGTCACCTGTC

3001 caccgctgagcaatggaagcgggtaggcctttggggcagcggccaatagcagctttgctc 3060
    GTGGCGACTCGTTACCTTCGCCATCCGAAACCCCGTCGCCGGTTATCGTCGAAACGAG

3061 cttcgtttctgggctcagaggtgggaaggggtgggtccgggggggggctcagggggcg 3120
    GAAGCGAAAGACCCGAGTCTCCGACCCTTCCCACCCAGCCCCCGCCGAGTCCCAGCC

3121 gtcagggggggggggggcggcgaaggtcctccggaggcccgccattctgcacgcttca 3180
    CGAGTCCCAGCCCCCGCGGGCTTCCAGGAGGCTCCGGGCGTAAGACGTGCGAAGT

3181 aaagcgcacgtctgcgcgctgttctctctctctcctcctccggcctttogacctatcg 3240
    TTTCCGCTGCAGACGGCGCGACAAGAGGAGAAGGAGTAGAGGCCCGAAAGCTGGATAGC

    T2A Peptide (3266,3329)>>>
    |
    KpnI
    |
3241 atcaattgagtacttactagtagtaccggttctgggtgagggcagaggaagtctgctaaca 3300
    TAGTTAACTCATGAATGCATCCATGGCCAAGACCCTCCCGTCTCCTTCAGACGATGTA

    NotI
    |
    EcoRI  EcoRV  ApaI  XbaI
    |      |      |      |
3301 gcggtgacgtcagaggagaatcctggcccagaatcgcatacggggcccgcgccgctota 3360
    CGCCACTGCAGTCTCTTAGGACCGGGTCTTAAGCTATAGCCCGGGCGCCGGCGCAGAT

    SV40 prom(3416,3684)>>>
    |
3361 gatgagtcgagtagccatacagcgtcccagactacgcttgagtttaaacacgcgtggtgt 3420
    CTACTCAGTCTCATGGGTATGCTGCAGGGTCTGATGCGAACTCAAATTTGTGCCACCCACA

3421 ggaaagtccccaggctccccagcagcagaagtagcaaaagcatgcactcctaattagtc 3480
    CCTTTCAGGGGTCCGAGGGGTCTCCGCTTTCATACGTTTCGTACGTAGAGTTAACTAGT

3481 gcaaccagggtgtgaaagtccccaggctccccagcagcagaagtagcaaaagcatgcat 3540
    CGTTGGTCCACACCTTTCAGGGGTCCGAGGGGTCTCCGCTTTCATACGTTTCGTACGTA

    SV40 origin (3583,3660)>>>
    |
3541 ctcaattagtcagcaaccatagtcoccccccctaactccgcccatacccccccctaactccg 3600
    GAGTTAATCAGTCGTTGGTATCAGGGCGGGATGAGGCGGGTAGGGCGGGGATTGAGGC

    ORF_2 rf(2) (3650,4318)>>>
    |
3601 cccagttccgcccattctccgcccattgctgactaattttttttatattatgcagaggcc 3660
    GGGTCAAGCGGGTAAGAGCGGGGTACCGACTGATTAATAAAAAATAAATACGTCCTCCGG

    SfiI
    |
    puro marker (3719,4318)>>>
    |
3661 gaggccgctcggcctotgagctattccagaagtagtgaggagcttttttgagggcoat 3720
    CTCCGGCGGAGCCGGAGACTCGATAAGGTCTTCATCACTCCTCCGAAAAAACCTCCGGTA

3721 gaccgagtaacaagcccaggtgcgctcgcaccocgcgacgctcctcgggcccgtacg 3780
    CTGGCTCATGTTCCGGTGCCACGCGGAGCGGTGGGCGTGTCTGAGGGAGCCCGGCATGC

3781 caccctcgcgcgcgcttcgcgcgactaccccgcacgcgccacacggtgaccggaccg 3840
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3841 ccacatcgagcgggtcaccgagctgcaagaactcttctcaccgcgctcgggtcgcacat 3900
    GGTGTAGCTCGCCAGTGGCTCGACGTTCTTGAGAAGGAGTGCAGCGAGCCCGAGCTGTA

3901 cggcaaggtgtgggtcgcggacgacgcccgggtggcgggtctggaccacgcggagag 3960
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3961 cgtcgaagcggggggggtgttcgcccagatcggcccgcgcatggcaggttgagcggttc 4020
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4021 ccggttggcgcgcagcaacagatggaagggctcctggcgcgcacccggcccaaggagcc 4080
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4081 cgcgtggttctgcccaccgtcggctctcgcgccaccaccagggaagggctctgggag 4140
    GCGCACCAAGGACCGGTGGCAGCCCGAGAGCGGGCTGGTGGTCCCGTTCCCAGACCCGTC

4141 cgcctcgtctccccggagtgaggcggcggcgcgcggggtgcccccttctctgga 4200

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4201 gacctccgcgccccgcaacctccccttctacgagcggtcggettcacgtaaccgcca 4260
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4261 cgtcgaggtgcccgaaggaccgacactggtgcatgaccgcaagcccgggtgctgaac 4320
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4321 gcgttccggaatcaacctctggattacaaaatttgtaaagattgactggtattcttaa 4380
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4381 ctatgttgcctcttttacgctatgtggatagcgtgctttaaagccttggatcatgctat 4440
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4441 tgcttccgctatggcttccattttctcctccttgataaaatcctggttggctgtctttaa 4500
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4501 tgaggagttgtggcccgttgctcaggcaactggtgggtggtgcaactggttggctgaac 4560
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4561 aacccccactggttggggcattgccaccctgtcagctcctttccgggaatttcgcttt 4620
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4621 cccctccctattgccacggcggaactcatcgccgctgcttggccgctgctggacagg 4680
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4681 ggctcggctggtggcactgacaattccgtggtggtgctgggaagctgacgtcctttcc 4740
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4741 atggctgctgcctgtggttgcacctggattctgctgggagcgtccttctgctacgtccc 4800
TACCGACGAGCGGACACAACGGTGGACCTAAGACGCGCCCTGCAGGAAGCAGTGCAGGG

4801 ttccggcctcaatccagcggaccttcttcccgccgctgctgcccgtctgcccctct 4860
AAGCCGGGAGTTAGTTCGCTGGAAGGAAGGGCGCCGGACGACGGCCGAGACGCCGGAGA

4861 tccgctctgccttgcctcagacgagtcggatctcccttggccgcccctcccgcct 4920
AGGCGCAGAGCGGAAGCGGAGTCTGCTCAGCTAGAGGAAACCCGGCGGAGGGGCGGA

delta_U3 other (4928, 4980) >>>

4921 gtccggatggaaggctaatcactcccaacgaatacaagatctgcttttggctgtact 4980
CAGGCCTACCTTCCCGATTAAAGTGGGGTTCCTTATGTTCTAGACGAAAACGAACATGA

HIV-1_5_LTR other (4981, 5161) >>>

4981 gggctctctggttagaccagatctgagcctgggagctctctggctaaactaggaacca 5040
CCCAGAGAGACCAATCTGGTCTAGACTCGGACCCCTCGAGAGACCGATTGATCCCTTGGGT

5041 ctgcttaagcctcaataaagccttgcttgaagcttcaagtagtggtgcccgtctggtg 5100
GACGAATTCGGAGTTATTTGAAACGGAACACGAAGTTCATCACACGGGCGAGACAAC

5101 tgtgactctggtaactagagatccctcagacccttttagtcagtggtgaaaatctctagc 5160
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5161 agtagtagtcatgtcatcttattatcagatattataacttgcaagaaatgaatatca 5220
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5221 gagagtgagaggaacttggttattgcagcttataatgggttacaaataaagcaatagc 5280
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5281 acaaatttcacaataaagcattttttcactgcattctagttggttggcttccaaactc 5340
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5341 atcaatgtatcttatacatgtctgcatctatgtcgggtgaggagaaagaggaatgaaat 5400
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5401 ggcattatgggtattatgggtctgcattaatgaatcgcccaacgatcccgggtgtaaaat 5460
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5461 ccgcacagatgctgaaggagaaaaatccgcatcaggcgtcttccgcttctcgtcact 5520
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5521 gactcgtcgcctcggtcgttctggctgctggcgagcgggtatcagctcactcaaaggcggt 5580
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5581 atacggttatccacagaatcaggggataacgcaggaaagaacatgtgagcaaaaggccag 5640
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pBR322 origin (5667, 6286) <<<

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5761 taaagataccaggcgtttccccctggaagctccctcgtgcgctctcctgttccgacccctg 5820
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5821 ccgcttaccggatacctgtccgcctttctcccttcgggaagcgtggcgtttctcatagc 5880
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6061 aggtatgtaggcgggtgctacagagttcttgaagtggtggcctaactacggctacactaga 6120
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6181 agctcttgatccggcaaaaaccaccgctggtagcgggtggtttttttgtttgcaagcag 6240
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6241 cagattacggcagaaaaaaggatctcaagaagatcctttgatctttctacggggtct 6300
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6421 gagtaaaacttggtctgacagttaccaatgcttaacagtgaggcacctatctcagcgatc 6480
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6481 tgtctatctgcttcatocatagttgctgactccccgctgtagataaactacgatacgg 6540
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6541 gagggcttaccatctggccccagtgctgcaatgataccgagagaccacgctcaccggct 6600
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6721 ccagtttaagtgttgcaacgttgtgaaaaaggatcttccactagatccttttcagct 6780
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6841 ggacaagggaaaacgcaagcgcaagagaagcaggttagcttgcagtggttctacatggc 6900
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NEOKAN prom(6939,6988)>>>

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6961 cctctggtaaggttgggaagccctgcaaaagtaaacggatggctttctcgcgcccaagga 7020
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BclI ORF_3 rf(3) (7077,7871)>>>

7021 tctgatggcgcaggggatcaagctctgatcaagagacaggatgaggatcgtttcgcataga 7080
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NTP_II marker (7080,7868)>>>

7081 ttgaacaagatggattgcaagcaggttctccggccttgggtggagaggctattcggct 7140
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7141 atgactgggcacaaacagacaatcggtgctctgatgcccggctgttcggctgtcagcgc 7200
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7201 aggggcccgggttctttttgtcaagaccgacctgtccggtgcctgaatgaactgcaag 7260
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7621 aggatctcgtcgtgacccatggcgatgcctgcttgcgcaatatcatggtggaataatggcc 7680
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7681 gcttttctggattcactcactgtggccggctgggtgtggcggaccgctatcagacatag 7740
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7741 cgttggtaccctgtatattgctgaagagcttggcggcgaatgggctgaccgcttcctcg 7800
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7801 tgctttacggtatcgcgcgtcccgattcgcagcgcacgccttctatcgccttcttgacg 7860
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7861 agttctctgaattttgttaaaatTTTTgttaaatcagctcattttttaaccaataggcc 7920
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f1 origin (7976, 8281) <<<

7921 gaaatcggcaacatcccttataaaatcaaaagaatagaccgcatagggttgagtgtgtgt 7980
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8161 cggggaagccggcgaacgtggcgagaaaggaaggaagcgaagcgaagcgaagcggcgct 8220
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8281 cgcgcctacagggcgcgtccattcgcattcaggatcgaattaattcttaattaacaatca 8340
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8341 tcaataatacctt 8355
 AGTTATTATATGGAA

Features

5'-LTR
 Start: 486 End: 2177

PolyA tail
 Start: 2628 End: 2434 (Complementary)

miniCMV promoter
 Start: 2723 End: 2656 (Complementary)

PGK promoter
 Start: 2724 End: 3236

T2A Peptide
 Start: 3267 End: 3329

SV40
 Start: 3416 End: 3718

Puro
 Start: 3719 End: 4318

3'-LTR
 Start: 5404 End: 4319 (Complementary)

Kanamycin/Neomycin
 Start: 7077 End: 7868