

Simbulan-Rosenthal *etal. Cells* 2024

Supplementary  
Figures Figure S1

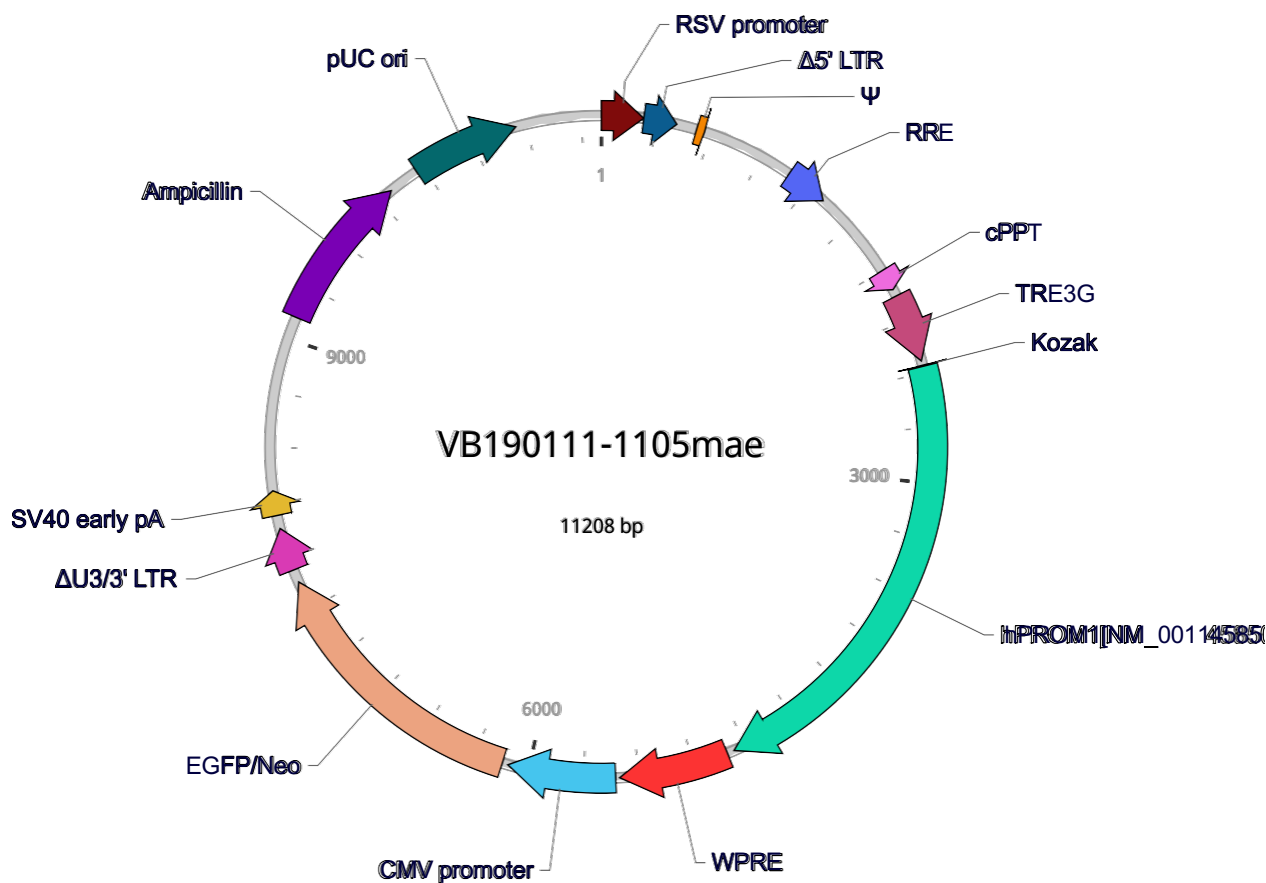
Vector Maps and Sequences for *pLenti-CMV-rtTA3 Blast* and *pLV-EGFP/Neo-TRE3G-CD133*.

## Vector Summary

<b>Vector ID</b>	VB190111-1105mae
<b>Vector Name</b>	pLV[TetOn]-EGFP/Neo-TRE3G>hPROM1[NM_001145850.1]
<b>Vector Size</b>	11208 bp
<b>Viral Genome Size</b>	7733 bp
<b>Vector Type</b>	Mammalian Tet-On Inducible Gene Expression Lentiviral Vector
<b>Inserted Promoter</b>	TRE3G
<b>Inserted ORF</b>	hPROM1[NM_001145850.1]
<b>Inserted Marker</b>	EGFP/Neo
<b>Plasmid Copy Number</b>	High
<b>Antibiotic Resistance</b>	Ampicillin
<b>Cloning Host</b>	Stbl3 (or alternative strain)

### Note:

## Vector Map



## Vector Components

Name	Position	Size (bp)	Type	Description	Application notes
RSV promoter	■ 1-229	229	Promoter	Rous sarcoma virus enhancer/promoter	Strong promoter; drives transcription of viral RNA in packaging cells.
Δ5' LTR	■ 230-410	181	LTR	Truncated HIV-1 5' long terminal repeat	Allows transcription of viral RNA and its packaging into virus.
Ψ	■ 521-565	45	Miscellaneous	Adenovirus packaging signal	Allows packaging of viral DNA into virus.
RRE	■ 1075-1308	234	Miscellaneous	HIV-1 Rev response element	Rev protein binding site that allows Rev-dependent nuclear export of viral RNA during viral packaging.
cPPT	■ 1803-1920	118	Miscellaneous	Central polypurine tract	Facilitates the nuclear import of HIV-1 cDNA through a central DNA flap.
<b>TRE3G</b>	■ 1959-2334	376	Promoter	Tetracycline-responsive element promoter (3rd generation)	Bound by transactivator Tet3G in the presence of tetracycline or its analogs (e.g. doxycycline); low background activity.
Kozak	■ 2359-2364	6	Miscellaneous	Kozak translation initiation sequence	Facilitates translation initiation of ATG start codon downstream of the Kozak sequence.
<b>hPROM1[NM_001145850.1]</b>	■ 2365-4869	2505	CDS	<i>None</i>	<i>None</i>
WPRE	■ 4908-5505	598	Miscellaneous	Woodchuck hepatitis virus posttranscriptional regulatory element	Enhances virus stability in packaging cells, leading to higher titer of packaged virus; enhances higher expression of transgenes.
CMV promoter	■ 5527-6114	588	Promoter	Human cytomegalovirus immediate early enhancer/promoter	Strong promoter; may have variable strength in some cell types.

Name	Position	Size (bp)	Type	Description	Application notes
<b>EGFP/Neo</b>	■ 6146-7657	1512	CDS	EGFP fused with Neo	Allows cells to be visualized by green fluorescence and resistant to geneticin (G418).
$\Delta$ U3/3' LTR	■ 7728-7962	235	LTR	Truncated HIV-1 3' long terminal repeat	Allows packaging of viral RNA into virus; self-inactivates the 5' LTR by a copying mechanism during viral genome integration; contains polyadenylation signal for transcription termination.
SV40 early pA	■ 8035-8169	135	PolyA_signal	Simian virus 40 early polyadenylation signal	Allows transcription termination and polyadenylation of mRNA transcribed by Pol II RNA polymerase.
Ampicillin	■ 9123-9983	861	CDS	Ampicillin resistance gene	Allows E. coli to be resistant to ampicillin.
pUC ori	■ 10154-10742	589	Rep_origin	pUC origin of replication	Facilitates plasmid replication in E. coli; regulates high-copy plasmid number (500-700).

**Note:** Components added by user are listed in **bold red** text.

## Vector Sequence

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1  AATGTAGTCT TATGCAATAC TCTTGTAGTC TTGCAACATG GTAACGATGA GTTAGCAACA TGCCTTACAA GGAGAGAAAA
81  AGCACCGTGC ATGCCGATTG GTGGAAGTAA GGTGGTACGA TCGTGCCTTA TTAGGAAGGC AACAGACGGG TCTGACATGG
161 ATTGGACGAA CCACTGAATT GCCGCATTGC AGAGATATTG TATTTAAGTG CCTAGCTCGA TACATAAACG GGTCTCTCTG
241 GTTAGACCAG ATCTGAGCCT GGGAGCTCTC TGGCTAACTA GGGAAACCCAC TGCTTAAGCC TCAATAAAGC TTGCCTTGAG
321 TGCTTCAAGT AGTGTGTGCC CGTCTGTTGT GTGACTCTGG TAACTAGAGA TCCCTCAGAC CCTTTTAGTC AGTGTGGAAA
401 ATCTCTAGCA GTGGCGCCCG AACAGGGACT TGAAAGCGAA AGGGAACCA GAGGAGCTCT CTCGACGCAG GACTCGGCTT
481 GCTGAAGCGC GCACGGCAAG AGGCGAGGGG CGGCGACTGG TGAGTACGCC AAAAATTTTG ACTAGCGGAG GCTAGAAGGA
561 GAGAGATGGG TCGGAGAGCG TCAGTATTAA GCGGGGAGA ATTAGATCGC GATGGGAAAA AATTCGGTTA AGGCCAGGGG
641 GAAAGAAAAA ATATAAATTA AAACATATAG TATGGGCAAG CAGGGAGCTA GAACGATTCG CAGTTAATCC TGGCCTGTTA
721 GAAACATCAG AAGGCTGTAG ACAAATACTG GGACAGCTAC AACCATCCCT TCAGACAGGA TCAGAAGAAC TTAGATCATT
801 ATATAATACA GTAGCAACCC TCTATTGTGT GCATCAAAGG ATAGAGATAA AAGACACCAA GGAAGCTTTA GACAAGATAG
881 AGGAAGAGCA AAACAAAAGT AAGACCACCG CACAGCAAGC GGCCGCTGAT CTTAGACCTT GGAGGAGGAG ATATGAGGGA
961 CAATTGGAGA AGTGAATTAT ATAAATATAA AGTAGTAAAA ATTGAACCAT TAGGAGTAGC ACCCACCAAG GCAAAGAGAA

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1041	<a href="#">GAGTGGTGCA</a>	<a href="#">GAGAGAAAAA</a>	<a href="#">AGAGCAGTGG</a>	<a href="#">GAATAGGAGC</a>	<a href="#">TTGTTCCTT</a>	<a href="#">GGGTTCTTGG</a>	<a href="#">GAGCAGCAGG</a>	<a href="#">AAGCACTATG</a>
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1201	<a href="#">GGCTATTGAG</a>	<a href="#">GCGCAACAGC</a>	<a href="#">ATCTGTTGCA</a>	<a href="#">ACTCACAGTC</a>	<a href="#">TGGGTCATCA</a>	<a href="#">AGCAGCTCCA</a>	<a href="#">GGCAAGAATC</a>	<a href="#">CTGGCTGTGG</a>
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5201	<u>TCCCCCTCCC</u>	<u>TATTGCCACG</u>	<u>GCGGAACCTA</u>	<u>TCGCCCGCTG</u>	<u>CCTTGCCCGC</u>	<u>TGCTGGACAG</u>	<u>GGGCTCGGCT</u>	<u>GTGGGGCACT</u>
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5761	<u>CAGTACATCA</u>	<u>AGTGTATCAT</u>	<u>ATGCCAAGTA</u>	<u>CGCCCCCTAT</u>	<u>TGACGTCAAT</u>	<u>GACGGTAAAT</u>	<u>GGCCCGCCTG</u>	<u>GCATTATGCC</u>
5841	<u>CAGTACATGA</u>	<u>CCTTATGGGA</u>	<u>CTTTCCTACT</u>	<u>TGGCAGTACA</u>	<u>TCTACGTATT</u>	<u>AGTCATCGCT</u>	<u>ATTACCATGG</u>	<u>TGATGCGGTT</u>
5921	<u>TTGGCAGTAC</u>	<u>ATCAATGGGC</u>	<u>GTGGATAGCG</u>	<u>GTTTGACTCA</u>	<u>CGGGGATTTC</u>	<u>CAAGTCTCCA</u>	<u>CCCCATTGAC</u>	<u>GTCAATGGGA</u>
6001	<u>GTTTGTTTTG</u>	<u>GCACCAAAAT</u>	<u>CAACGGGACT</u>	<u>TTCCAAAATG</u>	<u>TCGTAACAAC</u>	<u>TCCGCCCCAT</u>	<u>TGACGCAAAAT</u>	<u>GGGCGGTAGG</u>
6081	<u>CGTGTACGGT</u>	<u>GGGAGGTCTA</u>	<u>TATAAGCAGA</u>	<u>GCTCTCTGGC</u>	<u>TAAGTAGAGA</u>	<u>ACCCACTGCG</u>	<u>CCACCATGGT</u>	<u>GAGCAAGGGC</u>
6161	<u>GAGGAGCTGT</u>	<u>TCACCGGGGT</u>	<u>GGTGCCCATC</u>	<u>CTGGTCGAGC</u>	<u>TGGACGGCGA</u>	<u>CGTAAACGGC</u>	<u>CACAAGTTCA</u>	<u>CGGTGTCCGG</u>
6241	<u>CGAGGGCGAG</u>	<u>GGCGATGCCA</u>	<u>CCTACGGCAA</u>	<u>GCTGACCCTG</u>	<u>AAGTTCATCT</u>	<u>GCACCACCGG</u>	<u>CAAGCTGCCC</u>	<u>GTGCCCTGGC</u>
6321	<u>CCACCCTCGT</u>	<u>GACCACCCTG</u>	<u>ACCTACGGCG</u>	<u>TGCAGTGCTT</u>	<u>CAGCCGCTAC</u>	<u>CCCGACCACA</u>	<u>TGAAGCAGCA</u>	<u>CGACTTCTTC</u>
6401	<u>AAGTCCGCCA</u>	<u>TGCCCCAAGG</u>	<u>CTACGTCCAG</u>	<u>GAGCGCACCA</u>	<u>TCTTCTTCAA</u>	<u>GGACGACGGC</u>	<u>AACTACAAGA</u>	<u>CCC GCGCCGA</u>
6481	<u>GGTGAAGTTC</u>	<u>GAGGGCGACA</u>	<u>CCCTGGTGAA</u>	<u>CCGCATCGAG</u>	<u>CTGAAGGGCA</u>	<u>TCGACTTCAA</u>	<u>GGAGGACGGC</u>	<u>AACATCTTGG</u>
6561	<u>GGCACAAGCT</u>	<u>GGAGTACAAC</u>	<u>TACAACAGCC</u>	<u>ACAACGTCTA</u>	<u>TATCATGGCC</u>	<u>GACAAGCAGA</u>	<u>AGAACGGCAT</u>	<u>CAAGGTGAAC</u>
6641	<u>TTCAAGATCC</u>	<u>GCCACAACAT</u>	<u>CGAGGACGGC</u>	<u>AGCGTGCAGC</u>	<u>TCGCCGACCA</u>	<u>CTACCAGCAG</u>	<u>AACACCCCCA</u>	<u>TCGGCGACGG</u>
6721	<u>CCCCGTGCTG</u>	<u>CTGCCCGACA</u>	<u>ACCACTACCT</u>	<u>GAGCACCCAG</u>	<u>TCCGCCCTGA</u>	<u>GCAAAGACCC</u>	<u>CAACGAGAAG</u>	<u>CGCGATCACA</u>
6801	<u>TGGTCTTGCT</u>	<u>GGAGTTTCGT</u>	<u>ACCGCCGCGG</u>	<u>GGATCACTCT</u>	<u>CGGCATGGAC</u>	<u>GAGCTGTACA</u>	<u>AGATGATTGA</u>	<u>ACAAGATGGA</u>
6881	<u>TTGCACGCAG</u>	<u>GTCTCTCCGG</u>	<u>CGCTTGGGTG</u>	<u>GAGAGGCTAT</u>	<u>TCGGCTATGA</u>	<u>CTGGGCACAA</u>	<u>CAGACAATCG</u>	<u>GCTGCTCTGA</u>
6961	<u>TGCCGCCGTG</u>	<u>TTCCGGCTGT</u>	<u>CAGCGCAGGG</u>	<u>GCGCCCGGTT</u>	<u>CTTTTGTGTA</u>	<u>AGACCGACCT</u>	<u>GTCCGGTGCC</u>	<u>CTGAATGAAC</u>
7041	<u>TGCAAGACGA</u>	<u>GGCAGCGCGG</u>	<u>CTATCGTGGC</u>	<u>TGGCCACGAC</u>	<u>GGGCGTTTCT</u>	<u>TGCGCAGCTG</u>	<u>TGCTCGACGT</u>	<u>TGTCACTGAA</u>
7121	<u>GCGGGAAGGG</u>	<u>ACTGGCTGCT</u>	<u>ATTGGGCGAA</u>	<u>GTGCCGGGGC</u>	<u>AGGATCTCCT</u>	<u>GTCATCTCAC</u>	<u>CTTGCTCCTG</u>	<u>CCGAGAAAGT</u>
7201	<u>ATCCATCATG</u>	<u>GCTGATGCAA</u>	<u>TGCGGCGGCT</u>	<u>GCATACGCTT</u>	<u>GATCCGGCTA</u>	<u>CCTGCCCAT</u>	<u>CGACCACCAA</u>	<u>GCGAAACATC</u>
7281	<u>GCATCGAGCG</u>	<u>AGCACGTACT</u>	<u>CGGATGGAAG</u>	<u>CCGCTCTTGT</u>	<u>CGATCAGGAT</u>	<u>GATCTGGACG</u>	<u>AAGAGCATCA</u>	<u>GGGGCTCGCG</u>
7361	<u>CCAGCCGAAC</u>	<u>TGTTCCGCCG</u>	<u>GCTCAAGGCG</u>	<u>AGCATGCCCG</u>	<u>ACGGCGAGGA</u>	<u>TCTCGTCGTG</u>	<u>ACCCATGGCG</u>	<u>ATGCCTGCCT</u>
7441	<u>GCCGAATATC</u>	<u>ATGGTGGAAG</u>	<u>ATGGCCGCTT</u>	<u>TTCTGGATTG</u>	<u>ATCGACTGTG</u>	<u>GCCGGCTGGG</u>	<u>TGTGGCGGAC</u>	<u>CGCTATCAGG</u>
7521	<u>ACATAGCGTT</u>	<u>GGCTACCCGT</u>	<u>GATATTGCTG</u>	<u>AAGAGCTTGG</u>	<u>CGGCGAATGG</u>	<u>GCTGACCGCT</u>	<u>TCCTCGTGCT</u>	<u>TTACGGTATC</u>
7601	<u>GCCGCTCCCG</u>	<u>ATTTCGCAGCG</u>	<u>CATCGCCTTC</u>	<u>TATCGCCTTC</u>	<u>TTGACGAGTT</u>	<u>CTTCTGAGGT</u>	<u>ACCTTTAAGA</u>	<u>CCAATGACTT</u>
7681	<u>ACAAGGCAGC</u>	<u>TGTAGATCTT</u>	<u>AGCCACTTTT</u>	<u>TAAAAGAAAA</u>	<u>GGGGGGACTG</u>	<u>GAAGGGCTAA</u>	<u>TTCACTCCCA</u>	<u>ACGAAGACAA</u>
7761	<u>GATCTGCTTT</u>	<u>TTGCTTGTAC</u>	<u>TGGGTCTCTC</u>	<u>TGGTTAGACC</u>	<u>AGATCTGAGC</u>	<u>CTGGGAGCTC</u>	<u>TCTGGCTAAC</u>	<u>TAGGGAACCC</u>
7841	<u>ACTGCTTAAG</u>	<u>CCTCAATAAA</u>	<u>GCTTGCCCTG</u>	<u>AGTGCTTCAA</u>	<u>GTAGTGTGTG</u>	<u>CCCGTCTGTT</u>	<u>GTGTGACTCT</u>	<u>GGTAACTAGA</u>
7921	<u>GATCCCTCAG</u>	<u>ACCCTTTTAG</u>	<u>TCAGTGTGGA</u>	<u>AAATCTCTAG</u>	<u>CAGTAGTAGT</u>	<u>TCATGTCATC</u>	<u>TTATTATTCA</u>	<u>GTATTTATAA</u>
8001	<u>CTTGCAAAGA</u>	<u>AATGAATATC</u>	<u>AGAGAGTGAG</u>	<u>AGGAACCTGT</u>	<u>TTATTGCAGC</u>	<u>TTATAATGGT</u>	<u>TACAAATAAA</u>	<u>GCAATAGCAT</u>
8081	<u>CACAAATTTT</u>	<u>ACAAATAAAG</u>	<u>CATTTTTTTT</u>	<u>ACTGCATTCT</u>	<u>AGTTGTGGTT</u>	<u>TGTCCAAACT</u>	<u>CATCAATGTA</u>	<u>TCTTATCATG</u>
8161	<u>TCTGGCTCTA</u>	<u>GCTATCCCGC</u>	<u>CCCTAACTCC</u>	<u>GCCCATCCCG</u>	<u>CCCTAACTC</u>	<u>CGCCAGTTTC</u>	<u>CGCCCATTTT</u>	<u>CCGCCCATG</u>
8241	<u>GCTGACTAAT</u>	<u>TTTTTTTATT</u>	<u>TATGCAGAGG</u>	<u>CCGAGGCCGC</u>	<u>CTCGGCCTCT</u>	<u>GAGCTATTCC</u>	<u>AGAAGTAGTG</u>	<u>AGGAGGCTTT</u>
8321	<u>TTTGGAGGCC</u>	<u>TAGGGACGTA</u>	<u>CCCAATTCGC</u>	<u>CCTATAGTGA</u>	<u>GTCGTATTAC</u>	<u>GCGCGCTCAC</u>	<u>TGGCCGTCGT</u>	<u>TTTACAACGT</u>
8401	<u>CGTGAAGTGG</u>	<u>AAAACCTTGG</u>	<u>CGTTACCCAA</u>	<u>CTTAATCGCC</u>	<u>TTGCAGCACA</u>	<u>TCCCCCTTTC</u>	<u>GCCAGCTGGC</u>	<u>GTAATAGCGA</u>
8481	<u>AGAGGCCCGC</u>	<u>ACCGATCGCC</u>	<u>CTTCCCAACA</u>	<u>GTTGCGCAGC</u>	<u>CTGAATGGCG</u>	<u>AATGGGACGC</u>	<u>GCCCTGTAGC</u>	<u>GGCGCATTA</u>
8561	<u>GCGCGGCGGG</u>	<u>TGTGGTGGTT</u>	<u>ACGCGCAGCG</u>	<u>TGACCGCTAC</u>	<u>ACTTGCCAGC</u>	<u>GCCCTAGCGC</u>	<u>CCGCTCCTTT</u>	<u>CGCTTCTTTC</u>
8641	<u>CCTTCCTTTT</u>	<u>TCGCCACGTT</u>	<u>CGCCGGCTTT</u>	<u>CCCCGTCAAG</u>	<u>CTCTAAATCG</u>	<u>GGGGTCCCTT</u>	<u>TTAGGGTTCC</u>	<u>GATTTAGTGC</u>

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8721 TTTACGGCAC CTCGACCCCA AAAAATTGA TTAGGGTGAT GGTTCACGTA GTGGGCCATC GCCCTGATAG ACGGTTTTTC
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8881 TATTCTTTTG ATTTATAAGG GATTTTGCCG ATTTCGGCCT ATTGGTTAAA AAATGAGCTG ATTTAACAAA AATTTAACGC
8961 GAATTTTAAC AAAATATTAA CGCTTACAAT TTAGGTGGCA CTTTTCGGGG AAATGTGCGC GGAACCCCTA TTTGTTTATT
9041 TTTCTAAATA CATTCAAATA TGTATCCGCT CATGAGACAA TAACCCTGAT AAATGCTTCA ATAATATTGA AAAAGGAAGA
9121 GTATGAGTAT TCAACATTTT CGTGTGCGCC TTATTCCCTT TTTTGCGGCA TTTTGCCTTC CTGTTTTTGC TCACCCAGAA
9201 ACGCTGGTGA AAGTAAAAGA TGCTGAAGAT CAGTTGGGTG CACGAGTGGG TTACATCGAA CTGGATCTCA ACAGCGGTAA
9281 GATCCTTGAG AGTTTTTCGCC CCGAAGAACG TTTTCCAATG ATGAGCACTT TTAAAGTTCT GCTATGTGGC GCGGTATTAT
9361 CCCGTATTGA CGCGGGGCAA GAGCAACTCG GTCGCCGAT ACACTATTCT CAGAATGACT TGGTTGAGTA CTCACCAGTC
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9601 TTGATCGTTG GGAACCGGAG CTGAATGAAG CCATACCAAA CGACGAGCGT GACACCACGA TGCCTGTAGC AATGGCAACA
9681 ACGTTGCGCA AACTATTAAC TGGCGAACTA CTTACTCTAG CTCCCGGCA ACAATTAATA GACTGGATGG AGGCGGATAA
9761 AGTTGCAGGA CCACTTCTGC GCTCGGCCCT TCCGCTGGC TGGTTTATTG CTGATAAATC TGGAGCCGGT GAGCGTGGGT
9841 CTCGCGGTAT CATTCAGCA CTGGGGCCAG ATGGTAAGCC CTCCCGTATC GTAGTTATCT ACACGACGGG GAGTCAGGCA
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10001 CTCATATATA CTTTAGATTG ATTTAAAACT TCATTTTAA TTTAAAAGGA TCTAGGTGAA GATCCTTTTT GATAATCTCA
10081 TGACCAAAAT CCCTTAACGT GAGTTTTCGT TCCACTGAGC GTCAGACCCC GTAGAAAAGA TCAAAGGATC TTCTTGAGAT
10161 CCTTTTTTTC TGCGCGTAAT CTGCTGCTTG CAAACAAAAA AACCACCGCT ACCAGCGGTG GTTTGTTTGC CGGATCAAGA
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11201 GCAAGCTT

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