

10 20 30 40 50 60 70 80 90 2555

SacI SacI Clng promoter
GAGCTCATCG ATGAGCTCCA GAGAGGGACT GACGTTGGAA GGACCGCATC CCCCAGGGC CGCGGCCGCT GGGTCCCAG CCGCGGTGA

ClaI
100 110 120 130 140 150 160 170 180
2555

Clng promoter
GGCGGCCGCT TCGCAGCTGG GGCTGCCACT GCATCCTGCA TCCTCCGGCG CGGCCGCTCG CGCACGCGCA GTTAGCAGTC GCTGCTGGGC

190 200 210 220 230 240 250 260 270
Clng promoter

GGCTGCCGCG GGGATCGCTC TGGGGAGACG CCGGCACCA AGTAGCGGCC AGTCGGACAC CTGAGCTGCC GCTGCTGGAC ACAAGCCGCG

280 290 300 310 320 330 340 350 360
Clng promoter
AGGACAGGTG TGTAGACCGC GGGCCGCTT CTGCGGCTT GTTCTCTGGG GACCGGGTGA GAAATCGGAT Ccttagagga tccctgcaag

XbaI PstI
BamHI EcoRI
370 380 390 400 410 420 430 440 450

EcoRV SalI XhoI Rabbit beta globin pA signal
aattcgatat caagcttctc gacgcggccg cctcgagact CCTCAGGTGC AGGCTGCCIA TCAGAAGGTG GTGGCTGGTG TGGCCAATGC

EcoRI HindIII NotI
460 470 480 490 500 510 520 530 540
Rabbit beta globin pA signal

CCTGGCTCAC AAATACCACT GAGATCTTTT TCCCTCTGCC AAAAATTATG GGGACATCAT GAAGCCCCTT GAGCATCTGA CTCTCTGCIA

550 560 570 580 590 600 610 620 630
Rabbit beta globin pA signal

ATAAAGGAAA TTTATTTTCA TTGCAATAGT GTGTGGGAAT TTTTGTGTTC TCTCACTCGG AAGGACATAT GGGAGGGCAA ATCATTTAAA

640 650 660 670 680 690 700 710 720
Rabbit beta globin pA signal

ACATCAGAAT GAGTATTGG TTTAGAGTTT GGCAACATAT GCCATATGCT GGCTGCCATG AACAAAGGTG GCTATAAAGA GGTCATCAGT

730 740 750 760 770 780 790 800 810
Rabbit beta globin pA signal

ATATGAAACA GCCCCCTGCT GTCCATTCCT TATCCATAG AAAAGCCTTG ACTTGAGGT AGATTTTTTT TATATTTTGT TTTGTGTAT

820 830 840 850 860 870 880 890 900
Rabbit beta globin pA signal

TTTTTCTTT AACATCCCTA AAATTTTCCT TACATGTTTT ACTAGCCAGA TTTTTCTCC TCTCTGACT ACTCCCAGTC ATAGCTGTCC

910 920 930 940 950 960 970 980 990
Rabbit beta globin pA signaPacI

CCTCTCTTT ATGAAGATCC CTCGACTtaa ttaaggtacc caattcgccc tatagttagt cgtattacgc gcgctcactg gccgctgttt

KpnI
1000 1010 1020 1030 1040 1050 1060 1070 1080

tacaacgtcg tgactgggaa aaccctggcg ttacccaact taatgcctt gcagcacatc cccctttcgc cagctggcgt aatagcgaag

1090 1100 1110 1120 1130 1140 1150 1160 1170
aggcccgcac cgatgcacct tcccacagct tgcgcagcct gaatggcgaa tgggacgcgc cctgtagcgg cgcattaagc gcggcgggtg

1180 1190 1200 1210 1220 1230 1240 1250 1260
tggtggttac gcgcagcgtg accgctacac ttgccagcgc cctagcgcgc gctcctttcg ctttcttccc ttcctttctc gccacgttcg

1270 1280 1290 1300 1310 1320 1330 1340 1350
ccggctttcc ccgtcaagct ctaaactcggg ggctcccttt agggttccga tttagtgcct tacggcacct cgaccccaaa aaacttgatt

1360 1370 1380 1390 1400 1410 1420 1430 1440
agggtgatgt ttcacgtagt gggccatcgc cctgatagac ggtttttcgc cctttgacgt tggagtccac gttctttaat agtggactct

1450 1460 1470 1480 1490 1500 1510 1520 1530
tgttccaaac tggaacaaca ctcaacccta tctcggctca ttcttttgat ttataagga ttttgccgat ttggcctat tggttaaaaa

1540 1550 1560 1570 1580 1590 1600 1610 1620
atgagctgat ttaacaaaaa tttaacgcga attttaacaa aatattaacg cttacaattt aggtggcact tttcggggaa atgtgcgcgg

1630 1640 1650 1660 1670 1680 1690 1700 1710
aaccctatt tgtttatttt tctaaataca ttcaaatag tatccgctca tgagacaata accctgataa atgcttcaat aatattgaaa

1720 1730 1740 1750 1760 1770 1780 1790 1800
aaggaagagt atgagtattc aacatttccg tctcgcctt attccctttt ttgcggcatt ttgccttctc gtttttctc acccagaaac

1810 1820 1830 1840 1850 1860 1870 1880 1890
gctggtgaaa gtaaaagatg ctgaagatca gttgggtgca cgagtgggtt acatcgaact ggatctcaac agcggtaaga tccttgagag

1900 1910 1920 1930 1940 1950 1960 1970 1980
ttttcgcccc gaagaacgtt ttccaatgat gacactttt aaagtctcgc tatgtggcgc ggtattatcc cgtattgacg ccgggcaaga

1990 2000 2010 2020 2030 2040 2050 2060 2070
gcaactcggc cgccgcatac actattctca gaatgacttg gttgagtact caccagtcac agaaaagcat cttacggatg gcatgacagt

2080 2090 2100 2110 2120 2130 2140 2150 2160
aagagaatta tgcagtgctg ccataacatc gatgataac actgcggcca acttacttct gacaacgatc ggaggaccga aggagctaac

2170 2180 2190 2200 2210 2220 2230 2240 2250
cgcttttttg cacaacatgg gggatcatgt aactgcctt gatcgttggg aaccggagct gaatgaagcc ataccaaacg acgagcgtga

2260	2270	2280	2290	2300	2310	2320	2330	2340
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2350	2360	2370	2380	2390	2400	2410	2420	2430
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2440	2450	2460	2470	2480	2490	2500	2510	2520
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2530	2540	2550	2560	2570	2580	2590	2600	2610
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2620	2630	2640	2650	2660	2670	2680	2690	2700
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2710	2720	2730	2740	2750	2760	2770	2780	2790
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2800	2810	2820	2830	2840	2850	2860	2870	2880
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2890	2900	2910	2920	2930	2940	2950	2960	2970
gcagatacca	aatactgtcc	ttctagtgta	gccgtagtta	ggccaccact	tcaagaactc	tgtagcaccg	cctacatacc	tcgctctgct
2980	2990	3000	3010	3020	3030	3040	3050	3060
aatcctgtta	ccagtggctg	ctgccagtgg	cgataagtcg	tgtcttaccg	ggttggactc	aagacgatag	ttaccggata	aggcgcagcg
3070	3080	3090	3100	3110	3120	3130	3140	3150
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3160	3170	3180	3190	3200	3210	3220	3230	3240
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3250	3260	3270	3280	3290	3300	3310	3320	3330
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3340	3350	3360	3370	3380	3390	3400	3410	3420
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3430	3440	3450	3460	3470	3480	3490	3500	3510
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3520	3530	3540	3550	3560	3570	3580	3590	3600
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3610	3620	3630	3640	3650	3660	3670	3680	3690
gaaagcgggc	agtgagcgca	acgcaattaa	tgtgagttag	ctcactcatt	aggcacccca	ggctttacac	tttatgcttc	cggtcgtat
3700	3710	3720	3730	3740	3750	3760	3770	3780
gttgtgtgga	attgtgagcg	gataacaatt	tcacacagga	aacagctatg	accatgatta	cgccaagcgc	gcaattaacc	ctcactaaag
3790	3800	3810	3820	3830	3840	3850	3860	3870
ggaacaaaag	ctg							