				fragment3					
		E	3GH-rev						
	T. A. A. G. G. G. G. T. G.		T0T000TT0T40T		bGH po	ly(A) signal			T000
ATCAAGATGCTATAATGAGTT 1 12	TAAACCCGCTGA 24	a <mark>tcagcctcg</mark> ac 36	TGTGCCTTCTAG1	FTGCCAGCCATC 60	72	CTCCCCGTGCC 84	rtccttgaccctg 96	GAAGGTGCCAC 108	120
			bGH	l poly(A) signal					
ACTGTCCTTTCCTAATAAAAT	I		T		T			1	I
132	144	156	168	180	192	204	216	228 M13/pUC	240
bGH poly(A) signal							M1:	Reverse	Reverse
Derit perjy (1.1) enginar								711070100	
CATGCTGGGGATGCGGTGGGC	T		AACCAGCTGGGGC		1	GAGCTTGGCGTAA	ATCATGGTCATAG	CTGTTTCCTGT	
252	264	276	288	300	312	324	336	348	360
M13/pUC Reverse		lac promo	ter	J	CAP	pinding site			
AATTGTTATCCGCTCACAATT	CCACACACATA	AC <mark>G</mark> A <mark>G</mark> CC <mark>GG</mark> AA <mark>G</mark>	CA <mark>T</mark> AAA <mark>GTGT</mark> AAA	AGCCTAGGGTGC	CTAATGAGTGAG	C <mark>T</mark> AAC <mark>T</mark> CACA <mark>TT</mark>	AA <mark>TT</mark> GC <mark>GTTG</mark> CG	TCACTGCCCGC	TTTC
372	384	396	408	420	432	444	456	468	480
							L4440		
CAGTCGGGAAACCTGTCGTGC 492	504	A <mark>TGAATCGG</mark> CCA 516	ACGCGCGGGAGA 528	AGGCGGTTTGCG 540	TATTGGGCGCTC	TTCCGCTTCCTCC 564	GCTCACTGACTCG 576	S88	600
.02			020	0.0	332		0.0		
CGGCTGCGGCGAGCGGTATCA	T	<mark>GGCGGT</mark> AA <mark>T</mark> AC <mark>G</mark>	<mark>GTT</mark> A <mark>T</mark> CCACA <mark>G</mark> AA	TCAGGGGATAA			A <mark>GG</mark> CCA <mark>G</mark> CAAAA <mark>G</mark>		
612	624	636	648	660	672	684	696	708	720
ori pBR322ori-F									
AAGGCCGCGTTGCTGGCGTTT	TTCCATAGGCT	CC <mark>G</mark> CCCCC <mark>TG</mark> A	C <mark>G</mark> A <mark>G</mark> CA <mark>T</mark> CACAAA	AAA <mark>TCG</mark> ACGCTC	AAGTCAGAGGTG	GCGAAACCC <mark>G</mark> ACA	AGGACTATAAAGA	TACCAGGCGTT	TCCC
732	744	756	768	780	792	804	816	828	840
				ori					
CCTGGAAGCTCCCTCGTGCGC 852	TCTCCTGTTCCC	GACCC <mark>TG</mark> CCGC <mark>T</mark> 876	TACCGGATACCTG 888	STCCGCCTTTCT 900	CCC <mark>TTCGGG</mark> AAG 912	C <mark>GTGG</mark> CGCTTTCT 924	rca <mark>t</mark> agctcacgc 936	TGTAGGTATCT 948	960
		-		ori	-	•			
TCGGTGTAGGTCGTTCGCTCC				CGACCGCTGCGC	CTTATCCGGTAA	CTATCGTCTTGAC	GTCCAACCC <mark>GGT</mark> A		I
972	984	996	1008	1020	1032	1044	1056	1068	1080
CCACTGGCAGCAGCCACTGGT	AACAGGATTAGG	CAGAGCGACCTA	TGTAGGCGGTCGT	ori [ACAGAGTTCTT	BAAGTGGTGCCC	TAACTACGGGTAG	CACTAGAAGAACA	GTATTTGGTAT	CTGC
1092	1104	1116	1128	1140	1152	1164	1176	1188	1200
				ori					
GCTCTGCTGAAGCCAGTTACC		T			TGGTAGCGGTGG		CAA <mark>G</mark> CA <mark>G</mark> CAGA <mark>TT</mark>		I
1212	1224	1236	1248	1260	1272	1284	1296	1308	1320
Ori GGATCTCAAGAAGATCCTTTG	ATCTTTTCTACC	<mark>GGGGTCTG</mark> AC <mark>G</mark> C	TCAGTGGAACGA <i>A</i>	AAC <mark>T</mark> CAC <mark>GTT</mark> A	AGGGATTTTGGT	CA <mark>TG</mark> AGATTATCA	AAAA <mark>GG</mark> A <mark>TCTT</mark> C	ACCTAGATCCT	TTTA
1332	1344	1356	1368	1380	1392	1404	1416	1428	1440
						AmpR			
AA <mark>TT</mark> AAAAA <mark>TG</mark> AA <mark>GTTTT</mark> AAA 1452	TCAATCTAAAGT	TATATATGAGTA 1476	AAC <mark>TTGGT</mark> CTGAC 1488	CA <mark>GTT</mark> ACCAA <mark>TG</mark> 1500	CTTAATCAGTGAG 1512	GGCACC <mark>T</mark> ATCTCA 1524	A <mark>GCG</mark> A <mark>TCTGTCT</mark> A 1536	TTTCGTTCATC 1548	1560
1432	1404	1470	1400	AmpR	1912	1524	1556	1040	1560
GTTGCCTGACTCCCCGTCGTG	TAGATAACTAC	GA <mark>T</mark> AC <mark>GGG</mark> A <mark>GGG</mark>	CTTACCATCTGG	CCCCAGTGCTGC	AA <mark>TG</mark> ATACCGCG	A <mark>G</mark> ACCCAC <mark>G</mark> CTCA	ACC <mark>GG</mark> CTCCA <mark>G</mark> AT	TTATCAGCAAT	AAAC
1572	1584	1596	1608	1620	1632	1644	1656	1668	1680
CAGCCAGCCGGAAGGGCCGAG	CCCACAACTCC	TOOTOONACTIT	ATCCCCCTCCATC	AmpR	TCTTCCCCCA	ACCTACACTAAC		AATACTTTCCC	$C \wedge A C$
1692	1704	1716	ATCCGCCTCCATC	1740	1752	1764	1776	1788	1800
				AmpR					
GTTGTTGCCATTGCTACAGGC		1	T	1	1	1	ATGATCCCCCATG		ı
1812	1824	1836	1848	1860	1872	1884	1896	1908	1920
GTTAGCTCCTTCGGTCCTCCG	ATCGTTGTCAGA	AAGTAAGTTGGC	CGCAGTGTTATCA	AmpR	GCAGCACTGCA	TAATTCTCTTAC	rgtca <mark>tg</mark> ccatco	GTAAGATGCTT	TTCT
1932	1944	1956	1968	1980	1992	2004	2016	2028	2040
				AmpR					
						Amp			
GTGACTGGTGAGTACTCAACC 2052	AAGTCATTCTGA 2064	A <mark>G</mark> AA <mark>TAGTGTAT</mark> 2076	GCGGCGACCGAG1 2088	TTGCTCTTGCCC 2100	GGCGTCAA <mark>T</mark> ACGO 2112	<mark>GG</mark> A <mark>T</mark> AA <mark>T</mark> ACCGC(2124	GCCACA <mark>T</mark> AGCAGA 2136	ACTTTAAAAGT 2148	<mark>GСТС</mark> 2160
				AmpR					
ATCATTGGAAAACGTTCTTCG			ACCGCTGTTGAGA	ATCCA <mark>GTTCG</mark> AT		1	T	T	I
2172	2184	2196	2208	2220	2232	2244	2256	2268	2280
GTTTCTGGGTGAGCAAAAACA	GGAAGGCAAAA	AmpR TGCCGCAAAAA	GGGAATAAGGGCG	ACACGGAAATG	TTGAATACTCAT	ACTOTTCCTTTT	AmpR promote	AGCATTTATCA	GGGT
2292	2304	2316	2328	2340	2352	2364	2376	2388	2400
		promoter							
TATTGTCTCATGAGCGGATAC 2412	ATATTTGAATGT 2424	TA <mark>TTT</mark> AGAAAAA 2436	TAAACAAA <mark>T</mark> AGGO 2448	GGTTCCGCGCACA 2460	A <mark>TTT</mark> CCCC <mark>G</mark> AAA 2472	A <mark>GTG</mark> CCACC <mark>TG</mark> A(2484	C <mark>GTCG</mark> AC <mark>GG</mark> A <mark>T</mark> CG 2496	GGAGATCGATC 2508	TCCC 2520
Z 4 1Z		-marker	∠77 0	∠ 1 00	41 14	<u>4-10 </u>	∠ ⊣ ∂∪	2000	2J2U
GATCCCCTAGGGTCGACTCTC	AGTACAATCTG	-marker C <mark>TCTG</mark> ATGCCGC	A <mark>T</mark> A <mark>GTT</mark> AA <mark>G</mark> CCA <mark>G</mark>	STATCTGCTCCC	TGCTTGTGTGTT	GGAGGTCGCTGAC	GTAGTGCGCGAGC	AAAA <mark>TTT</mark> AA <mark>G</mark> C	TACA
2532	2544	2556	2568	2580	2592	2604	2616	2628	2640
ACAACCCAACCCTTCACCCA	A A T T C C A T C A A A	CAATOTOOTT	CCTTACCCCTTTT	CCCCTCCTTCC	CATCTACCCC		CMV	enhancer	TTAA
ACAA <mark>GG</mark> CAA <mark>GG</mark> CTTGACCGAC 2652	2664	2676	GGTTAGGCGTTT1 2688	2700	2712	CAGATATACGCG ^T 2724	rtgacattgatta 2736	2748	2760
				MV enhancer					
TAGTAATCAATTACGGGGTCA				TAACTTACGGT	T		CAACGACCCCGC	1	T
2772	2784	2796	2808	2820	2832	2844	2856	2868	2880
ATGACGTATGTTCCCATAGTA	AC <mark>G</mark> CCAA <mark>T</mark> AGG(GACTTTCCATTG	CM AC <mark>GT</mark> CAA <mark>TGGGT</mark>	MV enhancer GGAGTATTTACG	GTAAACTGCCCA	CTTGGCAGTACA	CAAGTGTATCAT	A <mark>TG</mark> CCAA <mark>GT</mark> AC	GCCC
2892	2904	2916	2928	2940	2952	2964	2976	2988	3000
								CMV	promoter
CCTATTGACGTCAATGACGGT	AAATCCCCCCCCC	CTGCCATTATOC	CMV er	nhancer	ICCTACTTOCCA:	GTACATCTACGTA	ATTAGTCATCGCT	ATTACCATGGT	GATO
3012	3024	3036	3048	3060	3072	3084	3096	3108	3120
				MV promoter					
CGGTTTTGGCAGTACATCAAT	1		AC <mark>GGGG</mark> A <mark>TTT</mark> CC	AAGTCTCCACCC	CATTGACGTCAA		TTGGCACCAAAAT	1	T
3132	3144	3156	3168	3180	3192	3204	3216	3228	3240
		CMV promoter							7 promoter
		CMV-F							
AAA <mark>TGT</mark> CGTAACAAC <mark>T</mark> CCGCC	T T		T	GGAGGTCTATAT	AAGCAGAGCTGG		CAGATCCGCTAG		T
3252	3264	3276	3288	3300	3312	3324	3336	3348	3360
T7 promoter AATACGACTCACTATAGGGAG	A <mark>G</mark> CC <mark>G</mark> CCACCA	T <mark>GG</mark> CACC <mark>G</mark> AA <mark>G</mark>							
3372	3384	3396							