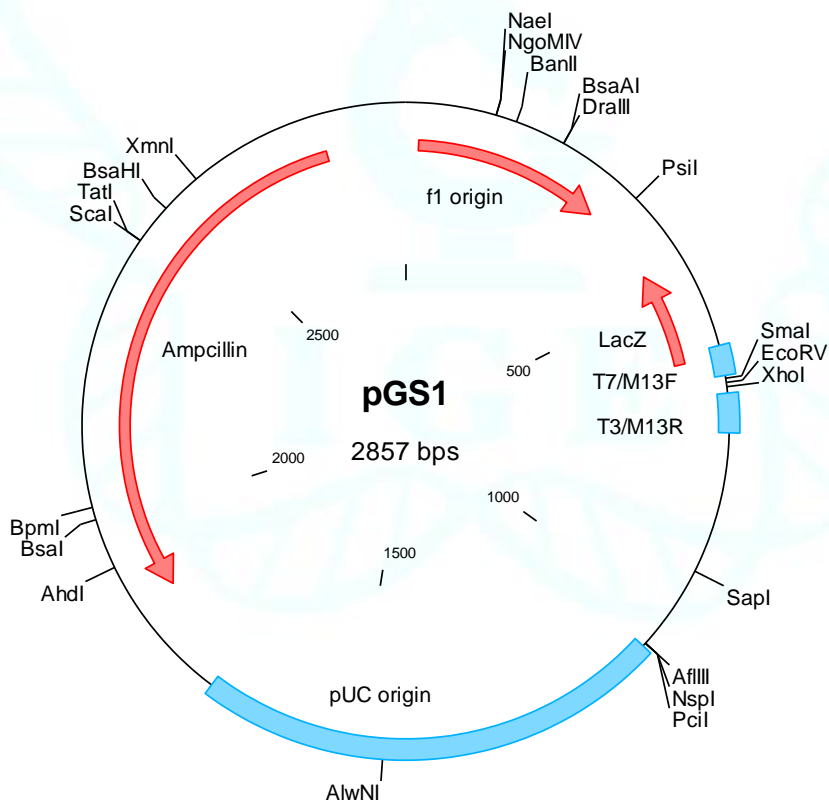


## pGSI Vector Information

**Description:** Plasmid pGSI, are small, high copy number, *E.coli* plasmids, 2875bp in length, is a derivative of pBluescript II SK(-). We delete most of the restriction sites of pBluescript II SK(-) and keep the SmaI, EcoRV and XhoI restriction sites. pGSI vector can use to clone fragments via blunt end ligation, while you amplify your PCR product via high fidelity polymerase.

pGSI vector also keep the *lacZ* gene, which encoding the N-terminal fragment of  $\beta$ -galactosidase (source M13mp18/19). This fragment, whose synthesis can be induced by IPTG, is capable of intra-allelic ( $\alpha$ ) complementation with a defective form of  $\beta$ -galactosidase encoded by the host (mutation  $\Delta(lacZ)$  M15). In the presence of IPTG, bacteria synthesize both fragments of the enzyme and form blue colonies on media with X-Gal. Insertion of DNA into the MCS located within the *lacZ* gene (codons 6-7 of *lacZ* are replaced by MCS) inactivates the N-terminal fragment of  $\beta$ -galactosidase and abolishes  $\alpha$ -complementation. Bacteria carrying recombinant plasmids therefore give rise to white colonies.



**Multiple Cloning stie:**

GAAGGGCGATCGGTGCGGGCCTCTTCGCTATTACGCCAGCTGGCGAAAGGGGGATGTGCTGCAAG

PUC344

M13(-47)

M13F

GCGATTAAGTTGGGTAACGCCAGGGTTTTCCAGTCACGACGTTGTAAAACGACGGCCAGTGAATT

T7

SmaI

EcoRV

XhoI

T3

GTAATACGACTCACTATAGGGCGAccc---ggggat---atcc-tcga-gGTTCCCTTTAGTGAGGGTTAATTGCGA

M13R

M13(-48)

PUC510R

GCTTGGCGTAATCATGGTCATAGCTGTTTCCTGTGTGAAATTGTTATCCGCTCACAATTCCACACAACA

TACGAGCCGAAGCATAAAGTGTAAGCCTGGGGTGCCTAATGAGTGAGCTAACTCACATTAATT

LOCUS pGS1 2857 bp DNA CIRCULAR SYN 05-FEB-2009  
 DEFINITION  
 ACCESSION pGS1  
 KEYWORDS .  
 SOURCE Unknown.  
 ORGANISM Unknown  
 Unclassified.  
 REFERENCE 1 (bases 1 to 2857)  
 AUTHORS Self  
 JOURNAL Unpublished.  
 COMMENT SECID/File created by SciEd Central, Scientific & Educational  
 Software  
 FEATURES Location/Qualifiers  
 CDS 21..327  
 /gene="f1 origin"  
 misc\_feature 600..643  
 /gene="T7/M13F"  
 CDS complement (460..615)  
 /gene="LacZ"  
 misc\_feature complement (668..724)  
 /gene="T3/M13R"  
 misc\_feature 1054..1721  
 /gene="pUC origin"  
 CDS complement (1872..2729)  
 /gene="Ampicillin"  
 BASE COUNT 690 a 724 c 701 g 742 t  
 ORIGIN

1 CTGACGCGCC CTGTAGCGGC GCATTAAGCG CGGCGGGTGT GGTGGTTACG CGCAGCGTGA  
 61 CCGCTACACT TGCCAGCGCC CTAGCGCCCG CTCCTTTCGC TTTCTTCCCT TCCTTTCTCG  
 121 CCACGTTCGC CGGCTTTCCC CGTCAAGCTC TAAATCGGGG GCTCCCTTTA GGGTTCCGAT

181	TTAGTGCTTT	ACGGCACCTC	GACCCCAAAA	AACTTGATTA	GGGTGATGGT	TCACGTAGTG
241	GGCCATCGCC	CTGATAGACG	GTTTTTCGCC	CTTTGACGTT	GGAGTCCACG	TTCTTTAATA
301	GTGGACTCTT	GTTCCAAACT	GGAACAACAC	TCAACCCTAT	CTCGGTCTAT	TCTTTTGATT
361	TATAAGGGAT	TTTGCCGATT	TCGGCCTATT	GGTTAAAAAA	TGAGCTGATT	TAACAAAAAT
421	TTAACGCGAA	TTTTAACAAA	ATATTAACGC	TTACAATTTG	CCATTCGCCA	TTCAGGCTGC
481	GCAACTGTTG	GGAAGGGCGA	TCGGTGCGGG	CCTCTTCGCT	ATTACGCCAG	CTGGCGAAAG
541	GGGGATGTGC	TGCAAGGCGA	TTAAGTTGGG	TAACGCCAGG	GTTTTCCCAG	TCACGACGTT
601	GTAAAACGAC	GGCCAGTGAA	TTGTAATACG	ACTCACTATA	GGGCGACCCG	GGGATATCCT
661	CGAGGTTCCC	TTTAGTGAGG	GTTAATTGCG	AGCTTGGCGT	AATCATGGTC	ATAGCTGTTT
721	CCTGTGTGAA	ATTGTTATCC	GCTCACAATT	CCACACAACA	TACGAGCCGG	AAGCATAAAG
781	TGTAAAGCCT	GGGGTGCCTA	ATGAGTGAGC	TAACTCACAT	TAATTGCGTT	GCGCTCACTG
841	CCCCTTTTCC	AGTCGGGAAA	CCTGTCTGTC	CAGCTGCATT	AATGAATCGG	CCAACGCGCG
901	GGGAGAGGCG	GTTTGCGTAT	TGGGCGCTCT	TCCGCTTCCT	CGCTCACTGA	CTCGCTGCGC
961	TCGGTCGTTT	GGCTGCGGCG	AGCGGTATCA	GCTCACTCAA	AGGCGGTAAT	ACGGTTATCC
1021	ACAGAATCAG	GGGATAACGC	AGGAAAGAAC	ATGTGAGCAA	AAGGCCAGCA	AAAGGCCAGG
1081	AACCGTAAAA	AGGCCGCGTT	GCTGGCGTTT	TTCCATAGGC	TCCGCCCCCC	TGACGAGCAT
1141	CACAAAAATC	GACGCTCAAG	TCAGAGGTGG	CGAAAACCCGA	CAGGACTATA	AAGATACCAG
1201	GCGTTTCCCC	CTGGAAGCTC	CCTCGTGCGC	TCTCCTGTTC	CGACCCTGCC	GCTTACCGGA
1261	TACCTGTCCG	CCTTTCTCCC	TTCGGGAAAGC	GTGGCGCTTT	CTCATAGCTC	ACGCTGTAGG
1321	TATCTCAGTT	CGGTGTAGGT	CGTTCGCTCC	AAGCTGGGCT	GTGTGCACGA	ACCCCCGTT
1381	CAGCCCGACC	GCTGCGCCTT	ATCCGGTAAC	TATCGTCTTG	AGTCCAACCC	GGTAAGACAC
1441	GACTTATCGC	CACTGGCAGC	AGCCACTGGT	AACAGGATTA	GCAGAGCGAG	GTATGTAGGC
1501	GGTGTACAG	AGTTCCTGAA	GTGGTGCCCT	AACTACGGCT	ACACTAGAAG	AACAGTATTT
1561	GGTATCTGCG	CTCTGCTGAA	GCCAGTTACC	TTCGGAAAAA	GAGTTGGTAG	CTCTTGATCC
1621	GGCAAACAAA	CCACCGCTGG	TAGCGGTGGT	TTTTTTGTTT	GCAAGCAGCA	GATTACGCGC
1681	AGAAAAAAG	GATCTCAAGA	AGATCCTTTG	ATCTTTTCTA	CGGGGTCTGA	CGCTCAGTGG
1741	AACGAAAACT	CACGTAAAGG	GATTTTGGTC	ATGAGATTAT	CAAAAAGGAT	CTTCACCTAG
1801	ATCCTTTTAA	ATTAAAAATG	AAGTTTAAA	TCAATCTAAA	GTATATATGA	GTAAACTTGG
1861	TCTGACAGTT	ACCAATGCTT	AATCAGTGAG	GCACCTATCT	CAGCGATCTG	TCTATTTCTG
1921	TCATCCATAG	TTGCCTGACT	CCCCGTCTGT	TAGATAACTA	CGATACGGGA	GGGCTTACCA
1981	TCTGGCCCCA	GTGCTGCAAT	GATACCGCGA	GACCCACGCT	CACCGGCTCC	AGATTTATCA
2041	GCAATAAACC	AGCCAGCCGG	AAGGGCCGAG	CGCAGAAAGT	GTCCTGCAAC	TTTATCCGCC
2101	TCCATCCAGT	CTATTAATTG	TTGCCGGGAA	GCTAGAGTAA	GTAGTTCGCC	AGTTAATAGT
2161	TTGCGCAACG	TTGTTGCCAT	TGCTACAGGC	ATCGTGGTGT	CACGCTCGTC	GTTTGGTATG
2221	GCTTCATTCA	GCTCCGGTTC	CCAACGATCA	AGGCGAGTTA	CATGATCCCC	CATGTTGTGC
2281	AAAAAAGCGG	TTAGCTCCTT	CGGTCCCTCCG	ATCGTTGTCA	GAAGTAAGTT	GGCCGAGTGT
2341	TTATCACTCA	TGGTTATGGC	AGCACTGCAT	AATTCTCTTA	CTGTCATGCC	ATCCGTAAGA
2401	TGCTTTTCTG	TGACTGGTGA	GTACTIONACC	AAGTCATTCT	GAGAATAGTG	TATGCGGCGA
2461	CCGAGTTGCT	CTTGCCCGGC	GTCAATACGG	GATAATACCG	CGCCACATAG	CAGAAC'TTTA
2521	AAAGTGCTCA	TCATTGGAAA	ACGTTCTTCG	GGGCGAAAAC	TCTCAAGGAT	CTTACCGCTG
2581	TTGAGATCCA	GTTTCGATGTA	ACCCACTCGT	GCACCCAACT	GATCTTCAGC	ATCTTTTACT
2641	TTCACCAGCG	TTTCTGGGTG	AGCAAAAAACA	GGAAGGCAAA	ATGCCGCAAA	AAAGGGAATA
2701	AGGGCGACAC	GGAAATGTTG	AATACTCATA	CTCTTCCTTT	TTCAATATTA	TTGAAGCATT
2761	TATCAGGGTT	ATTGTCTCAT	GAGCGGATAC	ATATTTGAAT	GTATTTAGAA	AAATAAACAA



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2821 ATAGGGGTTT CGCGCACATT TCCCCGAAAA GTGCCAC

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