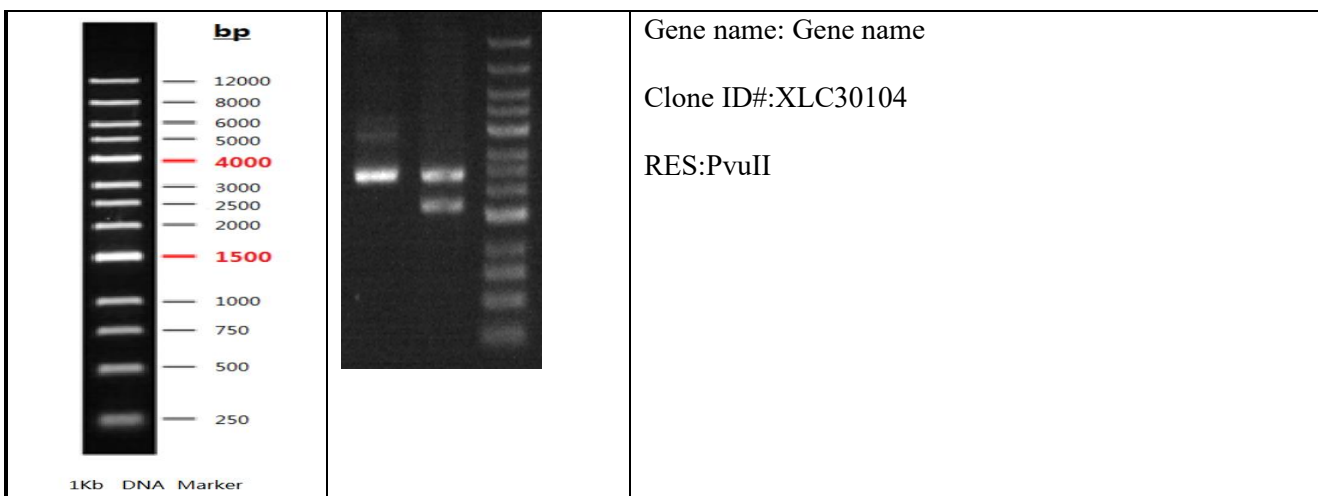
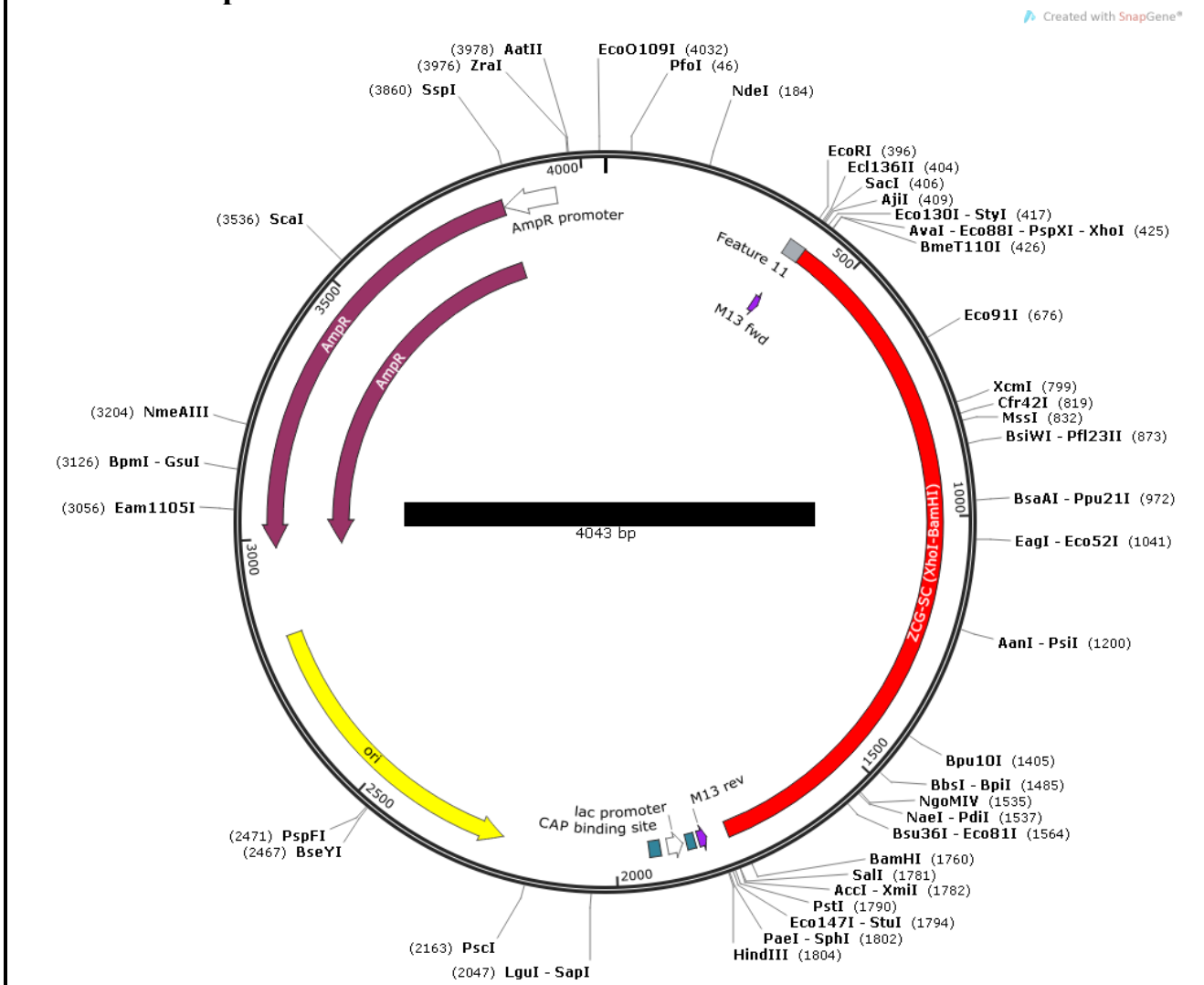


## Gene Synthesis QA Report

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|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|----------------|-------------------------------|
| Gene Name                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Gene Name                                        | Order ID       | SGxxxxxxxx                    |
| Lot#                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 20250601/92-2-XLC30104                           | Cloning Vector | pUC57-BsaI-free               |
| Length (bp)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 1373bp                                           | Cloning Sites  | seamless clone-seamless clone |
| Quality Control                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                  |                |                               |
| Test Items                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Specifications                                   |                | Results                       |
| Sequencing Alignment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Sequencing data consistent with target           |                | [ X ] Pass                    |
| Vector Sequence                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Flanking sequence of cloning sites are correct   |                | [ X ] Pass                    |
| Restriction Digest                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Insert size is correct and no contaminated bands |                | [ X ] Pass                    |
| ORF Across Junction                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Correct and consistent with target               |                | N/A                           |
| PCR Amplification                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Correct and no contaminated bands                |                | [ X ] Pass                    |
| Endotoxin Level                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Verified, <0.1 EU/μg (Endo-Free Preps Only)      |                | N/A                           |
| Appearance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Clear, no foreign particles                      |                | [ X ] Pass                    |
| DNA Purity                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Purity (A 260/A280 = 1.8 - 2.0)                  |                | [ X ] Pass                    |
| <div>Comments</div> <div>Delivery form: lyophilized plasmid (TE lyophilized) containing the gene insert. It is stable at room temperature for extended period of time during shipping. The lyophilized plasmid can be dissolved in sterile TE buffer or nuclease-free water (neutral pH) depending on the established laboratory practice. After reconstitution, store the stock solution at -20°C or -80°C for long term storage. The lyophilized plasmid dissolved in TE buffer is stable for at least 6 months at 4°C while the lyophilized DNA dissolved in water is <u>NOT STABLE</u> at 4°C.</div> <div><div>a) Before opening the tube containing the plasmid, please briefly centrifuge the tube. Lyophilized plasmid could attach to the wall of the tube. Opening without centrifugation could cause DNA loss.</div><div>b) Stock Solution: Reconstitute lyophilized plasmid (4ug or 10ug) in 40ul or 100ul of TE buffer or nuclease-free water (final concentration - 100ng/ul). To accurately determine the quantity of DNA present, please measure OD value of original stock at OD<sub>260nm</sub> after reconstitution.</div><div>c) Working Solution: make a 1:10 dilution of stock solution using TE buffer or nuclease-free water (final concentration - 10ng/ul)</div></div> <div>Transformation and Replating:</div> <div>Transform 2ul of stock solution into appropriate <i>E. coli</i> competent cells according to standard laboratory protocol. Plate the mixture on LB agar (with desired antibiotic selection) and incubate at 37°C for overnight. Select a well separated, <u>SINGLE</u> colony and inoculate in LB medium with desired antibiotic selection for overnight culture. Purify Plasmid DNA from overnight cultures, verify sequences and continue with project of interest. *It is important to select only a <u>SINGLE</u> colony for overnight culture.</div> |                                                  |                |                               |
| Restriction Digestion                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                  |                |                               |



## Construct Map:



## Detailed Sequence of the Whole Construct:

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1 TCGCGCGTTT CGGTGATGAC GGTGAAAACC TCTGACACAT GCAGCTCCCG GAGACGGTCA
61 CAGCTTGTCT GTAAGCGGAT GCCGGGAGCA GACAAGCCCG TCAGGGCGCG TCAGCGGGTG
121 TTGGCGGGTG TCGGGGCTGG CTTAACTATG CGGCATCAGA GCAGATTGTA CTGAGAGTGC
181 ACCATATGCG GTGTGAAATA CCGCACAGAT GCGTAAGGAG AAAATACCGC ATCAGGCGCC
241 ATTCGCCATT CAGGCTGCGC AACTGTTGGG AAGGGCGATC GGTGCGGGCC TCTTCGCTAT
301 TACGCCAGCT GCGGAAAGGG GGATGTGCTG CAAGGCGATT AAGTTGGGTA ACGCCAGGGT
361 TTTCCAGTC ACGACGTTGT AAAACGACGG CCAGTGAATT CGAGCTCAGC TCAAAGCCAA
421 GGCACCTCAG GTGCTGGCGG TTATTGATAA ACGTGGCGGT GCGGTTGGCA GCGGTGGCGG
481 TTCTGGCGGT GGCAGTGGTG GCGGTGGCAG CAAAACGGAT ACCTATAAAC TGATCCTGAA
541 CGGTAAACG CTGAAAGGCG AAACCACGAC CGAAGCAGTG GATGCAGCAA CCGCAGAAAA
601 AGTTTTTCAA CAGTACGCGA ACGATAATGG TGTGGATGGC GAATGGACCT ACGATGATGC
661 CACGAAACCC TTCACGGTTA CCGAAAAACC GGAAAGCGGT GCGGTTCTCG GCGGTGGCAG
721 TGGTGGCGGT GGCTCTAAAA CGGATACCTA CAACTGATT CTGAATGGTA AAACCTGAA
781 AGGCGAAACG ACCACGGAAG CAGTGGATGC AGCGACCGCG GAAAAAGTGT TTAAACAGTA
841 CGCAAATGAC AACGGCGTTG ACGGTGAATG GACGTACGAT GATGCGACCA AAACGTTTAC
901 CGTGACGGAG AAGCCTGAGA GCGGTGGCGG TTCTGGCGGT GGCAGTGGTG GCGGTGGCAG
961 CAAGACCGAC ACGTACAAAC TGATTCTGAA CGGCAAAACG CTGAAAGGTG AAACCACGAC
1021 CGAAGCCGTG GATGCCGCCA CGGCCGAAAA AGTGTTCAAA CAGTACGCCA ATGACAACGG
1081 CGTTGATGGT GAATGGACCT ATGACGATGC AACCAAAACG TTTACCGTCA CGGAAAAACC
1141 GGAATCTGGC GGGGGGAGTG GCGGCGGGTC GGGTGGCGGG GGTAGTAAAA CGGATACTTA
1201 TAAACTCAT TTTGAATGGCA AAACCTCAA GGGGGAGACT ACGACCGAGG CAGTGGATGC
1261 CGCGACGGCT GAAAAGGTGT TCAAGCAATA TGCAAACGAT AATGGTGTAG ATGGGGAGTG
1321 GACCTACGAT GATGCAACAA AGACGTTTAC TGTACCGGAA AAACCGAAT CAGGGGGTGG
1381 GTCGGGTGGT GGTTCGGGCG GGGGCTCAGG CGCTATGGTG GATACGCTGT CAGGTCTTAG
1441 CAGTGAACAG GGCCAAAGCG GTGACATGAC GACTCGAAGAA GACTCTGCAA CTCACATCAA
1501 ATTTAGTAAG CGCGACGAGG ATGGTAAAGA ACTGGCCGGC GCCACTATGG AGCTGCGGGA
1561 TTCTCAGGC AAAACGATCA GCACCTGGAT CAGTGATGGT CAAGTAAAGG ACTTTTACCT
1621 CTACCTGGT AAATATACTT TTGTGGAAC AGCAGCACCT GACGGTTATG AAGTGGCTAC
1681 CGCTATTACT TTTACTGTAA ACGAGCAGGG TCAAGTCACT GTTAATGGGA AAGCGACAAA
1741 GGGTGATGCA CATATCTGAG GATCCGGCTG CTAACAAAGC GTCGACTGCA GAGGCCTGCA
1801 TGCAAGCTTG GCGTAATCAT GGTTCATAGCT GTTTCCTGTG TGAAATTGTT ATCCGCTCAC
1861 AATTCACAC AACATACGAG CCGGAAGCAT AAAGTGTAAG GCCTGGGGTG CCTAATGAGT
1921 GAGCTAACTC ACATTAATTG CGTTGCGCTC ACTGCCCGCT TTCCAGTCGG GAAACCTGTC
1981 GTGCCAGCTG CATTAATGAA TCGGCCAACG CGCGGGGAGA GCGGTTTGC GTATTGGGCG
2041 CTCTTCCGCT TCCTCGCTCA CTGACTCGCT GCGCTCGGTC GTTCGGCTGC GGCGAGCGGT
2101 ATCAGCTCAC TCAAAGGCGG TAATACGGTT ATCCACAGAA TCAGGGGATA ACGCAGGAAA
2161 GAACATGTGA GCAAAAGGCC AGCAAAAGGC CAGGAACCGT AAAAAGGCCG CGTTGCTGGC
2221 GTTTTTCAT AGGCTCCGCC CCCCTGACGA GCATCACAAA AATCGACGCT CAAGTCAGAG
2281 GTGGCGAAAC CCGACAGGAC TATAAAGATA CCAGGCGTTT CCCCCTGGAA GCTCCCTCGT
2341 GCGCTCTCCT GTTCCGACCC TGCCGCTTAC CGGATACCTG TCCGCTTTC TCCCTTCGGG
2401 AAGCGTGGCG CTTTCTCATA GCTCACGCTG TAGGTATCTC AGTTCGGTGT AGGTCGTTTCG
2461 CTCCAAGCTG GGCTGTGTGC ACGAACCCCG CGTTCAGCCC GACCGCTGCG CCTATCCGG
2521 TAACTATCGT CTTGAGTCCA ACCCGTAAG ACACGACTTA TCGCCACTGG CAGCAGCCAC
2581 TGGAACAGG ATTAGCAGAG CGAGGTATGT AGGCGGTGCT ACAGAGTTCT TGAAGTGGTG
2641 GCCTAACTAC GGCTACACTA GAAGAACAGT ATTTGGTATC TGCGCTCTGC TGAAGCCAGT
2701 TACCTTCGGA AAAAGAGTTG GTAGCTCTTG ATCCGGCAAA CAAACCACCG CTGGTAGCGG
2761 TGGTTTTTTT GTTTGCAAGC AGCAGATTAC GCGCAGAAAA AAAGGATCTC AAGAAGATCC
2821 TTTGATCTTT TCTACGGGGT CTGACGCTCA GTGGAACGAA AACTCACGTT AAGGGATTTT
2881 GGTTCATGAGA TTATCAAAAA GGATCTTCAC CTAGATCCTT TTAAATTTAA AATGAAGTTT
2941 TAAATCAATC TAAAGTATAT ATGAGTAAAC TTGGTCTGAC AGTTACCAAT GCTTAATCAG
3001 TGAGGCACCT ATCTCAGCGA TCTGTCTATT TCGTTCATCC ATAGTTGCCT GACTCCCCGT
3061 CGTGTAGATA ACTACGATAC GGGAGGGCTT ACCATCTGGC CCCAGTGCTG CAATGATACC
3121 GCGAGATCCA CGCTACCGG CTCCAGATTT ATCAGCAATA AACCAGCCAG CCGGAAGGGC
3181 CGAGCGCAGA AGTGGTCCTG CAACTTTATC CGCCTCCATC CAGTCTATTA ATTGTTGCCG

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3241 GGAAGCTAGA GTAAGTAGTT CGCCAGTTAA TAGTTTGCGC AACGTTGTTG CCATTGCTAC
3301 AGGCATCGTG GTGTCACGCT CGTCGTTTGG TATGGCTTCA TTCAGCTCCG GTTCCCAACG
3361 ATCAAGGCGA GTTACATGAT CCCCATGTT GTGCAAAAAA GCGGTTAGCT CCTTCGGTCC
3421 TCCGATCGTT GTCAGAAGTA AGTTGGCCGC AGTGTTATCA CTCATGGTTA TGGCAGCACT
3481 GCATAATTCT CTTACTGTCA TGCCATCCGT AAGATGCTTT TCTGTGACTG GTGAGTACTC
3541 AACCAAGTCA TTCTGAGAAT AGTGTATGCG GCGACCGAGT TGCTCTTGCC CGGCGTCAAT
3601 ACGGGATAAT ACCGCGCCAC ATAGCAGAAC TTTAAAAGTG CTCATCATTG GAAAACGTTT
3661 TTCGGGGCGA AAACCTCTCA GGATCTTACC GCTGTTGAGA TCCAGTTCGA TGTAACCCAC
3721 TCGTGCACCC AACTGATCTT CAGCATCTTT TACTTTCACC AGCGTTTCTG GGTGAGCAAA
3781 AACAGGAAGG CAAAATGCCG CAAAAAAGGG AATAAGGGCG ACACGGAAAT GTTGAATACT
3841 CATACTCTTC CTTTTTCAAT ATTATTGAAG CATTTATCAG GGTATTGTG TCATGAGCGG
3901 ATACATATTT GAATGTATTT AGAAAAATAA ACAAATAGGG GTTCCGCGCA CATTTCCCGG
3961 AAAAGTGCCA CCTGACGTCT AAGAAACCAT TATTATCATG ACATTAACCT ATAAAAATAG
4021 GCGTATCACG AGGCCCTTTC GTC
  
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