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Gene Synthesis QA Report

Gene Name	CYP78C5 cs	**Order ID**	SG140999-1
Lot#	GB151124-35412	**Cloning Vector**	pBluescript II SK(+)
Length (bp)	1668	**Cloning Sites**	EcoR I/BamHI

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
DNA Quantity	Actual yield (by A 260)	5ug

Comments

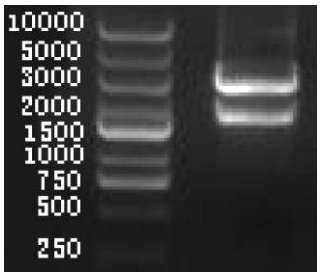
Delivery form: lyophilized plasmid (TE lyophilized) containing the gene insert. It is stable at room temperature for extended period of time during shipping. The lyophilized plasmid can be dissolved in sterile TE buffer or nuclease-free water (neutral pH) depending on the established laboratory practice. After reconstitution, store the stock solution at -20^{O}C or -80^{O}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 NOT STABLE at 4°C.

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.
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_{260}nm after reconstitution.
c) Working Solution: make a 1:10 dilution of stock solution using TE buffer or nuclease-free water (final concentration - 10ng/ul)

Transformation and Replating:

Transform 2ul of stock solution into appropriate *E. coli* 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, SINGLE 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 SINGLE colony for overnight culture.

Restriction Digestion



Gene name: CYP78C5 cs
Clone ID#: V9081-2
RES: XbaI/HindIII

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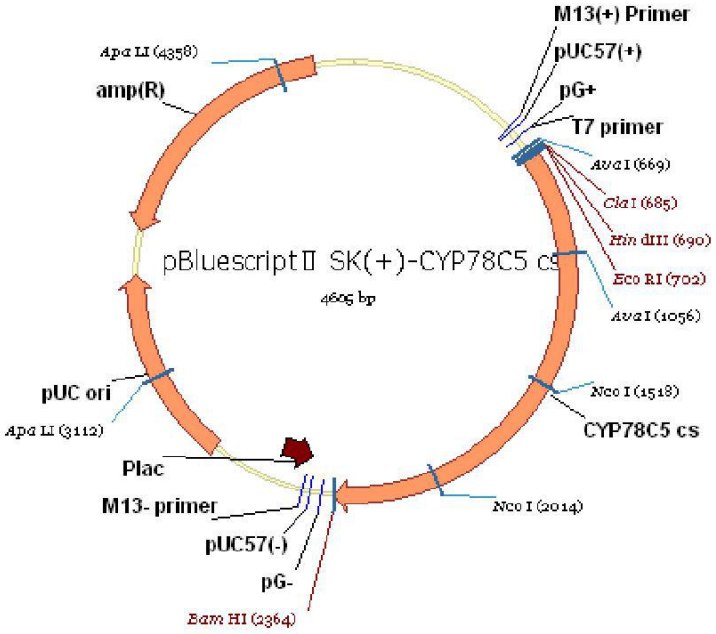
Construct Map:



Detailed Sequence of the Whole Construct:

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1     CTAAATTGTA AGCGTTAATA TTTTGTTAAA ATTCGCGTTA AATTTTTGTT AAATCAGCTC
61    ATTTTTTAAC CAATAGGCCG AAATCGGCAA AATCCCTTAT AAATCAAAAG AATAGACCGA
121   GATAGGGTTG AGTGTTGTTC CAGTTTGGAA CAAGAGTCCA CTATTAAAGA ACGTGGACTC
181   CAACGTCAAA GGGCGAAAAA CCGTCTATCA GGGCGATGGC CCACTACGTG AACCATCACC
241   CTAATCAAGT TTTTTGGGGT CGAGGTGCCG TAAAGCACTA AATCGGAACC CTAAAGGGAG
301   CCCCCGATTT AGAGCTTGAC GGGGAAAGCC GGCGAACGTG GCGAGAAAGG AAGGGAAGAA
361   AGCGAAAGGA GCGGGCGCTA GGGCGCTGGC AAGTGTAGCG GTCACGCTGC GCGTAACCAC
421   CACACCCGCC GCGCTTAATG CGCCGCTACA GGGCGCGTCC CATTCGCCAT TCAGGCTGCG
481   CAACTGTTGG GAAGGGCGAT CGGTGCGGGC CTCTTCGCTA TTACGCCAGC TGGCGAAAGG
541   GGGATGTGCT GCAAGGCGAT TAAGTTGGGT AACGCCAGGG TTTTCCCAGT CACGACGTTG
601   TAAAACGACG GCCAGTGAGC GCGCGTAATA CGACTCACTA TAGGGCGAAT TGGGTACCGG
661   GCCCCCCCTC GAGGTCGACG GTATCGATAA GCTTGATATC GAATTCATGG ACATGGACTC
721   GTCGCCGTCG ACACAGGACT GTGGCGGCTG GCTGCTGTAC GTCTCCCTCG CTGCCAAATG
781   CGGCGGCGAC CCTTGCCGCG TCGTCGGCTT CGTCGCCGTT GCCGTCGTCG CCTTCGCCGT
841   CACGTCGCTC CTGCACTGGC TGTCGCCCGG TGGCCCGGCG TGGGGGAGGT ATTGGTGGAA
901   CAGGAGGGGT GGTCTGGGCA TTGCTGCCGC CATTCCTGGG CCCCGTGGGT TGCCCGTGCT
961   CGGCAGCATG TCGCTCATGG CGGGACTCGC GCACCGGAAG CTCGCCGCGG CGGCGGGGGG
1021  CTCGCCGGCG AGGCGGCGCC TCATGGCGCT GTCTCTCGGG GAGACACGGG TGGTGGTCAC
1081  CGCCGACCCC GGCGTCGCGC GGGAGCTCCT CGCCAGCGCG GCGTTCGCCG ACCGGCCGGT
1141  GAAGGAGTCC GCGTACGGGA TGCTGTTCCA CCGCGCCATC GGGTTCGCGC CCTACGGCAC
1201  GTACTGGCGC GCGCTCCGCC GCGTCGCGTC CACGCACCTC TTCTCGCCGA GGCAGGTGTC
1261  CGCCTCCGCC GCGCAGCGCG CGGTGATCGC GCGCCAGATG GTGGAGGCCA TGAGGTCCGC
1321  CGCCGCCGCC GCCGCCGGTG GCGGCGTGGC GGCGAGGCCG TTCCTGAAGC GCGCGTCGCT
1381  GCACAACGTG ATGTGGTCGG TGTTCGGGAG GAAGTACGAG CTGGCGGCGC CGGAGAGCGA
1441  GGAGACGGCG GAGCTGAGGA GCATGGTGGA CGAAGGCTAC GACCTCCTCG GCCAGCTCAA
1501  CTGGTCCGAC CACCTCCCAT GGCTCGCACC CTTTGACCTC AAGAAGACGC GGTCAAGGTG
1561  CTCGTCCCTT GTCCCCCGCG TCAACCGCTT CGTCACCCGC ATCATCGACG AGCACCGTGC
1621  TCGCCTCAGC CTCGCCGTCG ACGCCGCCGT CGACTTCACC GACGTCCTTC TCTCCCTCCA
1681  CGGCGGCGAC AAGCTCTCCG ACGCCGACAT GGTCGCCGTC CTCTGGGAGA TGATCTTTCG
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1741  AGGGACGGAC ACGGTGGCGG TCCTGATCGA GTGGGTGGCG GCGAGGCTGG TGCTGCACCA
1801  GGACGTGCAG GCCAGGGTCC ATGACGAGCT GGACCGAGTG GTCGGGTCGG ACCGGGCAGT
1861  GACCGAGTCG GACGCGTCCA AGCTGGTCTA CCTCCAAGCG GTGATCAAAG AGGTCCTGCG
1921  CCTCCACCCG CCGGGCCCAC TGCTCTCGTG GGCACGCCTC GCCACGTCGG ATGTACACGT
1981  CGGCGGGTTC CTCATACCCT CTGGGACCAC CGCCATGGTG AACATGTGGG CCATAACCCA
2041  TGACCCTGCC GTTTGGCCCG ACCCGAACGA GTTCAAACCA GAGAGGTTCG TCGCAGGGCC
2101  CTCGTCGGAC CAGGCCACGG AGTTTCCGAT AATGGGGTCG GATCTCAGGC TCGCGCCGTT
2161  CGGGTCAGGA AGGCGAAGCT GCCCCGGCAA GTCGCTCGCC ATCGCCACTG TCGGATTCTG
2221  GGTTGCCACG TTGCTACACG AGTTCGATTG GCTTCCCTTG TCAGATAAGT CGCGCGGCGT
2281  CGATCTGTCG GAGGTGCTGA AGCTGTCGTG CGAGATGGCA ACCCCGCTGG AGGCAAGGCT
2341  AAGGCCGCGA CGCAAGGTGT GAGGATCCAC TAGTTCTAGA GCGGCCGCCA CCGCGGTGGA
2401  GCTCCAGCTT TTGTTCCCTT TAGTGAGGGT TAATTGCGCG CTTGGCGTAA TCATGGTCAT
2461  AGCTGTTTCC TGTGTGAAAT TGTTATCCGC TCACAATTCC ACACAACATA CGAGCCGGAA
2521  GCATAAAGTG TAAAGCCTGG GGTGCCTAAT GAGTGAGCTA ACTCACATTA ATTGCGTTGC
2581  GCTCACTGCC CGCTTTCCAG TCGGGAAACC TGTCGTGCCA GCTGCATTAA TGAATCGGCC
2641  AACGCGCGGG GAGAGGCGGT TTGCGTATTG GGCGCTCTTC CGCTTCCTCG CTCACTGACT
2701  CGCTGCGCTC GGTCGTTCGG CTGCGGCGAG CGGTATCAGC TCACTCAAAG GCGGTAATAC
2761  GGTTATCCAC AGAATCAGGG GATAACGCAG GAAAGAACAT GTGAGCAAAA GGCCAGCAAA
2821  AGGCCAGGAA CCGTAAAAAG GCCGCGTTGC TGGCGTTTTT CCATAGGCTC CGCCCCCCTG
2881  ACGAGCATCA CAAAAATCGA CGCTCAAGTC AGAGGTGGCG AAACCCGACA GGACTATAAA
2941  GATACCAGGC GTTTCCCCCT GGAAGCTCCC TCGTGCGCTC TCCTGTTCCG ACCCTGCCGC
3001  TTACCGGATA CCTGTCCGCC TTTCTCCCTT CGGGAAGCGT GGCGCTTTCT CATAGCTCAC
3061  GCTGTAGGTA TCTCAGTTCG GTGTAGGTCG TTCGCTCCAA GCTGGGCTGT GTGCACGAAC
3121  CCCCCGTTCA GCCCGACCGC TGCGCCTTAT CCGGTAACTA TCGTCTTGAG TCCAACCCGG
3181  TAAGACACGA CTTATCGCCA CTGGCAGCAG CCACTGGTAA CAGGATTAGC AGAGCGAGGT
3241  ATGTAGGCGG TGCTACAGAG TTCTTGAAGT GGTGGCCTAA CTACGGCTAC ACTAGAAGGA
3301  CAGTATTTGG TATCTGCGCT CTGCTGAAGC CAGTTACCTT CGGAAAAAGA GTTGGTAGCT
3361  CTTGATCCGG CAAACAAACC ACCGCTGGTA GCGGTGGTTT TTTTGTTTGC AAGCAGCAGA
3421  TTACGCGCAG AAAAAAAGGA TCTCAAGAAG ATCCTTTGAT CTTTTCTACG GGGTCTGACG
3481  CTCAGTGGAA CGAAAACTCA CGTTAAGGGA TTTTGGTCAT GAGATTATCA AAAAGGATCT
3541  TCACCTAGAT CCTTTTAAAT TAAAAATGAA GTTTTAAATC AATCTAAAGT ATATATGAGT
3601  AAACTTGGTC TGACAGTTAC CAATGCTTAA TCAGTGAGGC ACCTATCTCA GCGATCTGTC
3661  TATTTCGTTC ATCCATAGTT GCCTGACTCC CCGTCGTGTA GATAACTACG ATACGGGAGG
3721  GCTTACCATC TGGCCCCAGT GCTGCAATGA TACCGCGAGA CCCACGCTCA CCGGCTCCAG
3781  ATTTATCAGC AATAAACCAG CCAGCCGGAA GGGCCGAGCG CAGAAGTGGT CCTGCAACTT
3841  TATCCGCCTC CATCCAGTCT ATTAATTGTT GCCGGGAAGC TAGAGTAAGT AGTTCGCCAG
3901  TTAATAGTTT GCGCAACGTT GTTGCCATTG CTACAGGCAT CGTGGTGTCA CGCTCGTCGT
3961  TTGGTATGGC TTCATTCAGC TCCGGTTCCC AACGATCAAG GCGAGTTACA TGATCCCCCA
4021  TGTTGTGCAA AAAAGCGGTT AGCTCCTTCG GTCCTCCGAT CGTTGTCAGA AGTAAGTTGG
4081  CCGCAGTGTT ATCACTCATG GTTATGGCAG CACTGCATAA TTCTCTTACT GTCATGCCAT
4141  CCGTAAGATG CTTTTCTGTG ACTGGTGAGT ACTCAACCAA GTCATTCTGA GAATAGTGTA
4201  TGCGGCGACC GAGTTGCTCT TGCCCGGCGT CAATACGGGA TAATACCGCG CCACATAGCA
4261  GAACTTTAAA AGTGCTCATC ATTGGAAAAC GTTCTTCGGG GCGAAAACTC TCAAGGATCT
4321  TACCGCTGTT GAGATCCAGT TCGATGTAAC CCACTCGTGC ACCCAACTGA TCTTCAGCAT
4381  CTTTTACTTT CACCAGCGTT TCTGGGTGAG CAAAAACAGG AAGGCAAAAT GCCGCAAAAA
4441  AGGGAATAAG GGCGACACGG AAATGTTGAA TACTCATACT CTTCCTTTTT CAATATTATT
4501  GAAGCATTTA TCAGGGTTAT TGTCTCATGA GCGGATACAT ATTTGAATGT ATTTAGAAAA
4561  ATAAACAAAT AGGGGTTCCG CGCACATTTC CCCGAAAAGT GCCAC
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Certified by: Patrick Barretto

Date: 10/25/2019