PiggyBac Dual promoter (PB513B- 1)

PVT1601 2ug Lot No.: According to the label

Store at -20℃ Expiry date: : According to the label

PiggyBac Dual promoter (PB513B- 1) Information

Promoter: CMV promoter

Replicator: pUC ori, F1 ori

Terminator: SV40 poly (A) signal

Plasmid classification: lactation series plasmids; lactation editing plasmids; lactation transposing plasmids

Plasmid size: 7258bp

Prokaryotic resistance: ampicillin Amp (100 u g/ml)

Screening markers: green fluorescent protein CopGFP, purinamycin Puro (10ug/ml)

Cloned strains of Escherichia coli, DH5 A and other Escherichia coli

Culture conditions: 37 centigrade, aerobic LB

Expression host: mammalian cells such as 293T

Culture conditions: 37 C, 5%CO2

Induction mode: no induction, instantaneous expression

5'sequencing primers: CMV-F (CGCAAATGGGCGGTAGGCGTG)

3'sequencing primers: Sv40-polyA-R (GAAATTTGTGATGCTATTGC)

PiggyBac Dual promoter (PB513B- 1) Description

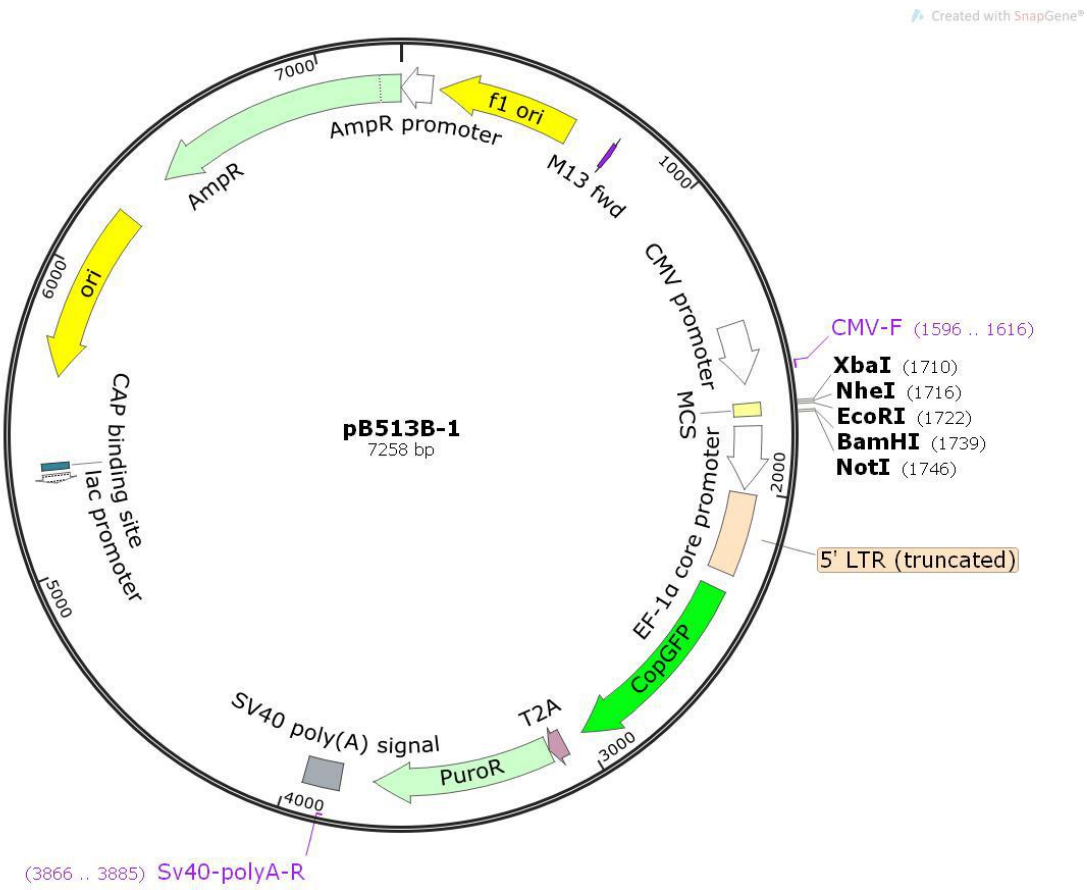
PiggyBac Dual promoter (PB513B-1) is a plasmid for mammalian cell transposition experiment, located at the downstream of CMV promoter, MCS, so that the target gene or microRNA is more convenient to clone. The downstream EF-1 alpha core promoter starts the expression of GFP.

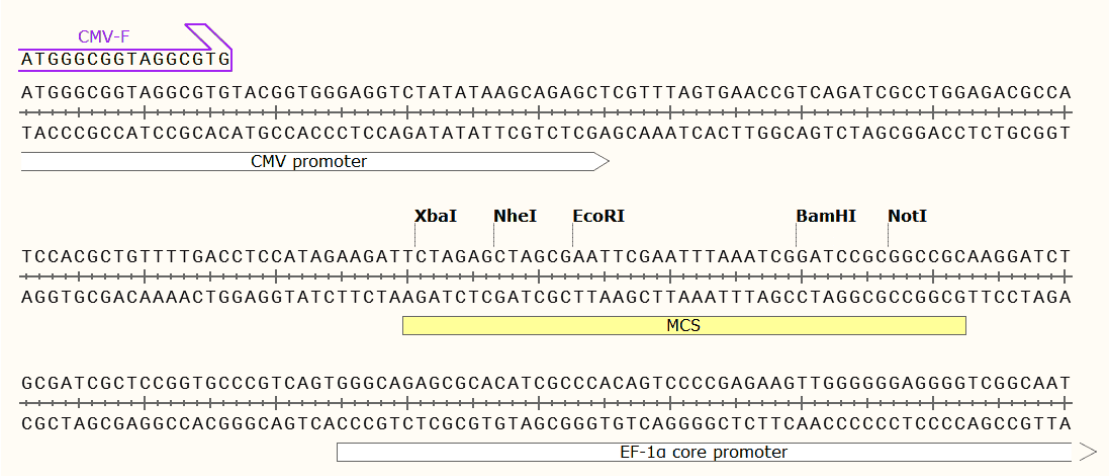
The PiggyBac (PB) transposon is a mobile genetic element that efficiently transposes between vectors and chromosomes via a "cut and paste" mechanism. During transposition, the PB transposase recognizes transposon-specific inverted terminal repeat sequences (ITRs) located on both ends of the transposon vector and efficiently moves the contents from the original sites and efficiently integrates them into TTAA chromosomal sites. The powerful activity of the piggyBac transposon system enables genes of interest between the two ITRs in the PB vector to be easily mobilized into target genomes.

The unique features of piggyBac transposons are that there is NO Cargo Limit and it is also Reversible. Genomes containing an inserted piggyBac vector can be transiently re-transfected with the PB transposase expression vector. The PB transposase will remove the transposons from the genome, footprint-free.The Super PiggyBac transposase transient expression vector and PB513B-1 were co-transfected into HeLa cells and puromycin selection applied for 10 days (10ug/ml). Cells efficiently transposed were Puro resistant and GFP positive.

Nova lifetech Inc.
Add: MNJ 2059 RM 1062 16/F
OMEGA PLAZA 32 DUNDAS ST MONGKOK KI
HONGKONG
Tel:(852)81700345 Email: sales@lifescience-market.com

PiggyBac Dual promoter (PB513B- 1) Map





PiggyBac Dual promoter (PB513B- 1) Sequences

LOCUS Exported File 7258 bp ds-DNA circular SYN 24-5-2015
KEYWORDS PiggyBac Dual promoter(PB513B-1)
SOURCE synthetic DNA construct

Nova lifetech Inc.
Add: MNJ 2059 RM 1062 16/F
OMEGA PLAZA 32 DUNDAS ST MONGKOK KI
HONGKONG
Tel:(852)81700345 Email: sales@lifescience-market.com

```
  ORGANISM    synthetic DNA construct
REFERENCE     1    (bases 1 to 7258)
  TITLE         Direct Submission
  JOURNAL     Exported 2015-5-24
FEATURES                    Location/Qualifiers
       source               1..7258
                            /organism="synthetic DNA construct"
                            /mol_type="other DNA"
       promoter             complement(1..105)
                            /gene="bla"
                            /note="AmpR promoter"
       rep_origin           complement(131..586)
                            /direction=LEFT
                            /note="f1 ori"
                            /note="f1 bacteriophage origin of replication; arrow
                            indicates direction of (+) strand synthesis"
       primer_bind          728..744
                            /note="M13 fwd"
                            /note="common sequencing primer, one of multiple
similar
                            variants"
       promoter             1442..1645
                            /note="CMV promoter"
                            /note="human cytomegalovirus (CMV) immediate early
                            promoter"
       CDS                  3068..3121
                            /codon_start=1
                            /product="2A peptide from?Thosea asigna virus capsid
                            protein"
                            /note="T2A"
                            /note="Eukaryotic ribosomes fail to insert a peptide bond
                            between the Gly and Pro residues, yielding separate
                            polypeptides."
                            /protein_id="
                            "
                            /translation="EGRGSLLTCGDVEENPGP"
       CDS                  3122..3721
                            /codon_start=1
                            /gene="pac from Streptomyces alboniger"
                            /product="puromycin N-acetyltransferase"
                            /note="PuroR"
                            /note="confers resistance to puromycin"
```

```
                     /translation="MTEYKPTVRLATRDDVPRAVRTLAAAFADYPATR
HTVDPDRHIER
                     VTELQELFLTRVGLDIGKVWVADDGAAVAVWTTPESVEAGAVFA
EIGPRMAELSGSRLA
                     AQQQMEGLLAPHRPKEPAWFLATVGVSPDHQGKGLGSAVVLPG
VEAAERAGVPAFLETS
                     APRNLPFYERLGFTVTADVEVPEGPRTWCMTRKPGA"
     polyA_signal    3829..3950
                     /note="SV40 poly(A) signal"
                     /note="SV40 polyadenylation signal"
     primer_bind     complement(5237..5253)
                     /note="M13 rev"
                     /note="common sequencing primer, one of multiple
similar
                     variants"
     protein_bind    5261..5277
                     /bound_moiety="lac repressor encoded by lacI"
                     /note="lac operator"
                     /note="The lac repressor binds to the lac operator to
                     inhibit transcription in E. coli. This inhibition can be
                     relieved by adding lactose or
                     isopropyl-beta-D-thiogalactopyranoside (IPTG)."
     promoter        complement(5285..5315)
                     /note="lac promoter"
                     /note="promoter for the E. coli lac operon"
     protein_bind    5330..5351
                     /bound_moiety="E. coli catabolite activator protein"
                     /note="CAP binding site"
                     /note="CAP binding activates transcription in the presence
                     of cAMP."
     rep_origin      complement(5639..6227)
                     /direction=LEFT
                     /note="ori"
                     /note="high-copy-number ColE1/pMB1/pBR322/pUC origin
of
                     replication"
     CDS             complement(6398..7258)
                     /codon_start=1
                     /gene="bla"
                     /product="beta-lactamase"
                     /note="AmpR"
                     /note="confers resistance to ampicillin, carbenicillin, and
                     related antibiotics"
```

/translation="MSIQHFRVALIPFFAAFCLPVFAHPETLVKVKDAE
DQLGARVGYI
ELDLNSGKILESFRPEERFPMMSTFKVLLCGAVLSRIDAGQEQLGR
RIHYSQNDLVEYS
PVTEKHLTDGMTVRELCSAAITMSDNTAANLLLTTIGGPKELTAFL
HNMGDHVTRLDRW
EPELNEAIPNDERDTTMPVAMATTLRKLLTGELLTLASRQQLIDW
MEADKVAGPLLRSA
LPAGWFIADKSGAGERGSRGIIAALGPDGKPSRIVVIYTTGSQATM
DERNRQIAEIGAS
LIKHW"

ORIGIN

```
      1 actcttcctt tttcaatatt attgaagcat ttatcagggt tattgtctca tgagcggata
     61 catatttgaa tgtatttaga aaaataaaca aataggggtt ccgcgcacat ttccccgaaa
    121 agtgccacct aaattgtaag cgttaatatt ttgttaaaat tcgcgttaaa tttttgttaa
    181 atcagctcat tttttaacca ataggccgaa atcggcaaaa tcccttataa atcaaaagaa
    241 tagaccgaga tagggttgag tgttgttcca gtttggaaca agagtccact attaaagaac
    301 gtggactcca acgtcaaagg gcgaaaaacc gtctatcagg gcgatggccc actacgtgaa
    361 ccatcaccct aatcaagttt tttggggtcg aggtgccgta aagcactaaa tcggaaccct
    421 aaagggagcc cccgatttag agcttgacgg ggaaagccgg cgaacgtggc gagaaaggaa
    481 gggaagaaag cgaaaggagc gggcgctagg gcgctggcaa gtgtagcggt cacgctgcgc
    541 gtaaccacca cacccgccgc gcttaatgcg ccgctacagg gcgcgtccca ttcgccattc
    601 aggctgcgca actgttggga agggcgatcg gtgcgggcct cttcgctatt acgccagctg
    661 gcgaaagggg gatgtgctgc aaggcgatta agttgggtaa cgccagggtt ttcccagtca
    721 cgacgttgta aaacgacggc cagtgagcgc gcctcgttca ttcacgtttt tgaacccgtg
    781 gaggacgggc agactcgcgg tgcaaatgtg ttttacagcg tgatggagca gatgaagatg
    841 ctcgacacgc tgcagaacac gcagctagat taaccctaga aagataatca tattgtgacg
    901 tacgttaaag ataatcatgc gtaaaattga cgcatgtgtt ttatcggtct gtatatcgag
    961 gtttatttat taatttgaat agatattaag ttttattata tttacactta catactaata
   1021 ataaattcaa caaacaattt atttatgttt atttatttat taaaaaaaaa caaaaactca
   1081 aaatttcttc tataaagtaa caaaactttt atgagggaca gccccccccc aaagccccca
   1141 gggatgtaat tacgtccctc ccccgctagg gggcagcagc gagccgcccg gggctccgct
   1201 ccggtccggc gctccccccg catccccgag ccggcagcgt gcggggacag cccgggcacg
   1261 gggaaggtgg cacgggatcg ctttcctctg aacgcttctc gctgctcttt gagcctgcag
   1321 acacctgggg ggatacgggg aaaaggcctc caaggcctac tagtattatg cccagtacat
   1381 gaccttatgg gactttccta cttggcagta catctacgta ttagtcatcg ctattaccat
   1441 ggtgatgcgg ttttggcagt acatcaatgg gcgtggatag cggtttgact cacggggatt
   1501 tccaagtctc caccccattg acgtcaatgg gagtttgttt tggcaccaaa atcaacggga
   1561 ctttccaaaa tgtcgtaaca actccgcccc attgacgcaa atgggcggta ggcgtgtacg
   1621 gtgggaggtc tatataagca gagctcgttt agtgaaccgt cagatcgcct ggagacgcca
   1681 tccacgctgt tttgacctcc atagaagatt ctagagctag cgaattcgaa tttaaatcgg
   1741 atccgcggcc gcaaggatct gcgatcgctc cggtgcccgt cagtgggcag agcgcacatc
   1801 gcccacagtc cccgagaagt tgggggggagg ggtcggcaat tgaacgggtg cctagagaag
```

1861 gtggcgcggg gtaaactggg aaagtgatgt cgtgtactgg ctccgccttt ttcccgaggg
1921 tgggggagaa ccgtatataa gtgcagtagt cgccgtgaac gttctttttc gcaacgggtt
1981 tgccgccaga acacagctga agcttcgagg ggctcgcatc tctccttcac gcgcccgccg
2041 ccctacctga ggccgccatc cacgccggtt gagtcgcgtt ctgccgcctc ccgcctgtgg
2101 tgcctcctga actgcgtccg ccgtctaggt aagtttaaag ctcaggtcga gaccgggcct
2161 ttgtccggcg ctcccttgga gcctacctag actcagccgg ctctccacgc tttgcctgac
2221 cctgcttgct caactctacg tctttgtttc gttttctgtt ctgcgccgtt acagatccaa
2281 gctgtgaccg gcgcctacgc tagacgccac catggagagc gacgagagcg gcctgcccgc
2341 catggagatc gagtgccgca tcaccggcac cctgaacggc gtggagttcg agctggtggg
2401 cggcggagag ggcaccccca agcagggccg catgaccaac aagatgaaga gcaccaaagg
2461 cgccctgacc ttcagcccct acctgctgag ccacgtgatg ggctacggct tctaccactt
2521 cggcacctac cccagcggct acgagaaccc cttcctgcac gccatcaaca acggcggcta
2581 caccaacacc cgcatcgaga agtacgagga cggcggcgtg ctgcacgtga gcttcagcta
2641 ccgctacgag gccggccgcg tgatcggcga cttcaaggtg gtgggcaccg gcttccccga
2701 ggacagcgtg atcttcaccg acaagatcat ccgcagcaac gccaccgtgg agcacctgca
2761 ccccatgggc gataacgtgc tggtgggcag cttcgcccgc accttcagcc tgcgcgacgg
2821 cggctactac agcttcgtgg tggacagcca catgcacttc aagagcgcca tccaccccag
2881 catcctgcag aacgggggcc ccatgttcgc cttccgccgc gtggaggagc tgcacagcaa
2941 caccgagctg ggcatcgtgg agtaccagca cgccttcaag acccccatcg ccttcgccag
3001 atcccgcgct cagtcgtcca attctgccgt ggacggcacc gccggacccg gctccaccgg
3061 atctcgcgag ggcagaggaa gtcttctaac atgcggtgac gtggaggaga atcccggccc
3121 tatgaccgag tacaagccca cggtgcgcct cgccacccgc gacgacgtcc ccagggccgt
3181 acgcaccctc gccgccgcgt tcgccgacta ccccgccacg cgccacaccg tcgatccgga
3241 ccgccacatc gagcgggtca ccgagctgca agaactcttc ctcacgcgcg tcgggctcga
3301 catcggcaag gtgtgggtcg cggacgacgg cgccgcggtg gcggtctgga ccacgccgga
3361 gagcgtcgaa gcgggggcgg tgttcgccga gatcggcccg cgcatggccg agttgagcgg
3421 ttcccggctg gccgcgcagc aacagatgga aggcctcctg gcgccgcacc ggcccaagga
3481 gcccgcgtgg ttcctggcca ccgtcggcgt ctcgcccgac caccagggca agggtctggg
3541 cagcgccgtc gtgctccccg gagtggaggc ggccgagcgc gccggggtgc ccgccttcct
3601 ggagacctcc gcgccccgca acctcccctt ctacgagcgg ctcggcttca ccgtcaccgc
3661 cgacgtcgag gtgcccgaag gaccgcgcac ctggtgcatg acccgcaagc ccggtgcctg
3721 aaatcaacct ctggattaca aaatttgtga aagattgact ggtattctta actatgttgc
3781 tccttttacg ctatgtggat acgctgcttt aatgcctttg tatcagttaa cttgtttatt
3841 gcagcttata atggttacaa ataaagcaat agcatcacaa atttcacaaa taaagcattt
3901 ttttcactgc attctagttg tggtttgtcc aaactcatca atgtatctta tcatgtctgg
3961 aattgactca aatgatgtca attagtctat cagaagctat ctggtctccc ttccgggggga
4021 caagacatcc ctgtttaata tttaaacagc agtgttccca aactgggttc ttatatccct
4081 tgctctggtc aaccaggttg cagggtttcc tgtcctcaca ggaacgaagt ccctaaagaa
4141 acagtggcag ccaggtttag ccccggaatt gactggattc ctttttagg gcccattggt
4201 atggcttttt ccccgtatcc ccccaggtgt ctgcaggctc aaagagcagc gagaagcgtt
4261 cagaggaaag cgatcccgtg ccaccttccc cgtgcccggg ctgtccccgc acgctgccgg
4321 ctcggggatg cgggggggagc gccggaccgg agcggagccc cgggcggctc gctgctgccc
4381 cctagcgggg gagggacgta attacatccc tgggggcttt gggggggggc tgtccctgat

Nova lifetech Inc.
Add: MNJ 2059 RM 1062 16/F
OMEGA PLAZA 32 DUNDAS ST MONGKOK KI
HONGKONG
Tel:(852)81700345 Email: sales@lifescience-market.com

4441 atctataaca agaaaatata tatataataa gttatcacgt aagtagaaca tgaaataaca
4501 atataattat cgtatgagtt aaatcttaaa agtcacgtaa aagataatca tgcgtcattt
4561 tgactcacgc ggtcgttata gttcaaaatc agtgacactt accgcattga caagcacgcc
4621 tcacgggagc tccaagcggc gactgagatg tcctaaatgc acagcgacgg attcgcgcta
4681 tttagaaaga gagagcaata tttcaagaat gcatgcgtca attttacgca gactatcttt
4741 ctagggttaa tctagctgca tcaggatcat atcgtcgggt ctttttttccg gctcagtcat
4801 cgcccaagct ggcgctatct gggcatcggg gaggaagaag cccgtgcctt ttcccgcgag
4861 gttgaagcgg catggaaaga gtttgccgag gatgactgct gctgcattga cgttgagcga
4921 aaacgcacgt ttaccatgat gattcgggaa ggtgtggcca tgcacgcctt taacggtgaa
4981 ctgttcgttc aggccacctg ggataccagt tcgtcgcggc ttttccggac acagttccgg
5041 atggtcagcc cgaagcgcat cagcaacccg aacaataccg gcgacagccg gaactgccgt
5101 gccggtgtgc agattaatga cagcggtgcg gcgctgggat attacgtcag cgaggacggg
5161 tatcctggct ggatgccgca gaaatggaca tggatacccc gtgagttacc cggcgggcgc
5221 gcttggcgta atcatggtca tagctgtttc ctgtgtgaaa ttgttatccg ctcacaattc
5281 cacacaacat acgagccgga agcataaagt gtaaagcctg gggtgcctaa tgagtgagct
5341 aactcacatt aattgcgttg cgctcactgc ccgctttcca gtcgggaaac ctgtcgtgcc
5401 agctgcatta atgaatcggc caacgcgcgg ggagaggcgg tttgcgtatt gggcgctctt
5461 ccgcttcctc gctcactgac tcgctgcgct cggtcgttcg gctgcggcga gcggtatcag
5521 ctcactcaaa ggcggtaata cggttatcca cagaatcagg ggataacgca ggaaagaaca
5581 tgtgagcaaa aggccagcaa aaggccagga accgtaaaaa ggccgcgttg ctggcgtttt
5641 tccataggct ccgccccccct gacgagcatc acaaaaatcg acgctcaagt cagaggtggc
5701 gaaacccgac aggactataa agataccagg cgtttccccc tggaagctcc ctcgtgcgct
5761 ctcctgttcc gaccctgccg cttaccggat acctgtccgc ctttctccct tcgggaagcg
5821 tggcgctttc tcatagctca cgctgtaggt atctcagttc ggtgtaggtc gttcgctcca
5881 agctgggctg tgtgcacgaa ccccccgttc agcccgaccg ctgcgcctta tccggtaact
5941 atcgtcttga gtccaacccg gtaagacacg acttatcgcc actggcagca gccactggta
6001 acaggattag cagagcgagg tatgtaggcg gtgctacaga gttcttgaag tggtggccta
6061 actacggcta cactagaagg acagtatttg gtatctgcgc tctgctgaag ccagttacct
6121 tcggaaaaag agttggtagc tcttgatccg gcaaacaaac caccgctggt agcggtggtt
6181 tttttgtttg caagcagcag attacgcgca gaaaaaaagg atctcaagaa gatcctttga
6241 tcttttctac ggggtctgac gctcagtgga acgaaaactc acgttaaggg attttggtca
6301 tgagattatc aaaaaggatc ttcacctaga tccttttaaa ttaaaaatga agttttaaat
6361 caatctaaag tatatatgag taaacttggt ctgacagtta ccaatgctta atcagtgagg
6421 cacctatctc agcgatctgt ctatttcgtt catccatagt tgcctgactc cccgtcgtgt
6481 agataactac gatacgggag ggcttaccat ctggccccag tgctgcaatg ataccgcgag
6541 acccacgctc accggctcca gatttatcag caataaacca gccagccgga agggccgagc
6601 gcagaagtgg tcctgcaact ttatccgcct ccatccagtc tattaattgt tgccgggaag
6661 ctagagtaag tagttcgcca gttaatagtt tgcgcaacgt tgttgccatt gctacaggca
6721 tcgtggtgtc acgctcgtcg tttggtatgg cttcattcag ctccggttcc caacgatcaa
6781 ggcgagttac atgatccccc atgttgtgca aaaaagcggt tagctccttc ggtcctccga
6841 tcgttgtcag aagtaagttg gccgcagtgt tatcactcat ggttatggca gcactgcata
6901 attctcttac tgtcatgcca tccgtaagat gcttttctgt gactggtgag tactcaacca
6961 agtcattctg agaatagtgt atgcggcgac cgagttgctc ttgcccggcg tcaatacggg

Nova lifetech Inc.
Add: MNJ 2059 RM 1062 16/F
OMEGA PLAZA 32 DUNDAS ST MONGKOK KI
HONGKONG
Tel:(852)81700345 Email: sales@lifescience-market.com

7021 ataataccgc gccacatagc agaactttaa aagtgctcat cattggaaaa cgttcttcgg
7081 ggcgaaaact ctcaaggatc ttaccgctgt tgagatccag ttcgatgtaa cccactcgtg
7141 cacccaactg atcttcagca tcttttactt tcaccagcgt ttctgggtga gcaaaaacag
7201 gaaggcaaaa tgccgcaaaa aagggaataa gggcgacacg gaaatgttga atactcat
//

Caution:

1. This product is FOR RESEARCH USE ONLY!

2. The item is lyophilized form, Please take the powder plasmid by centrifugation at 5000rpm/min for 1min. Add 20μl ddH2O in to the tube of plasmid.Take 2ul plasmid into 100 μ L corresponding competent cell, centrifugal then full coating on plate.

3. Shipping temperature is 2-8℃.

Nova lifetech Inc.
Add: MNJ 2059 RM 1062 16/F
OMEGA PLAZA 32 DUNDAS ST MONGKOK KI
HONGKONG
Tel:(852)81700345 Email: sales@lifescience-market.com