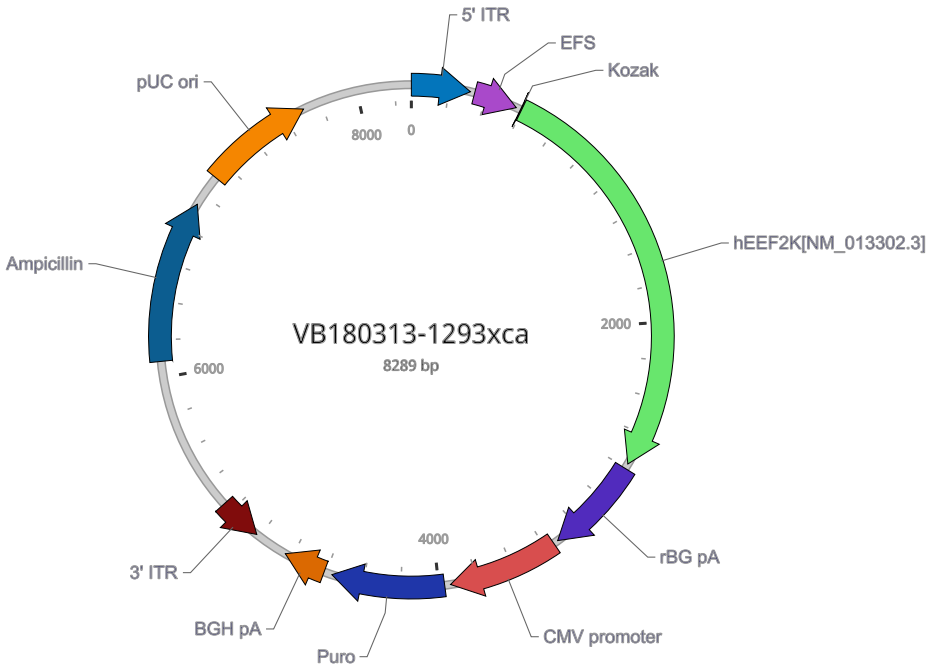
Vector Summary

Vector ID	VB180313-1293xca
Vector Name	pPB[Exp]-Puro-EFS>hEEF2K[NM_013302.3]
Date Created (Pacific Time)	2018-03-13
Size	8289 bp
Vector Type	PiggyBac transposon gene expression vector
Inserted Promoter	EFS
Inserted ORF	hEEF2K[NM_013302.3]
Inserted Marker	Puro
Plasmid Copy Number	High
Antibiotic Resistance	Ampicillin
Cloning Host	Stbl3 (or alternative strain)

Vector Map



Vector Components

Name	Position	Size (bp)	Type	Description	Application notes
5' ITR	1-313	313	ITR	piggyBac 5' inverted terminal repeat	Recognized by PBase transposase; DNA flanked by piggyBac 5' ITR and 3' ITR can be transposed by PBase into TTAA sites.
EFS	337-568	232	Promoter	Human eukaryotic translation elongation factor 1 α1 short form	Strong promoter.
Kozak	593-598	6	Miscellaneous	Kozak translation initiation sequence	Facilitates translation initiation of ATG start codon downstream of the Kozak sequence.
hEEF2K[NM_013302.3]	599-2776	2178	ORF	*None*	*None*
rBG pA	2804-3325	522	PolyA_signal	Rabbit beta-globin polyadenylation signal	Allows transcription termination and polyadenylation of mRNA transcribed by Pol II RNA polymerase.

Name	Position	Size (bp)	Type	Description	Application notes
CMV promoter	3351-3938	588	Promoter	Human cytomegalovirus immediate early enhancer/promoter	Strong promoter; may have variable strength in some cell types.
Puro	3970-4569	600	ORF	Puromycin resistance gene	Allows cells to be resistant to puromycin.
BGH pA	4613-4837	225	PolyA_signal	Bovine growth hormone polyadenylation signal	Allows transcription termination and polyadenylation of mRNA transcribed by Pol II RNA polymerase.
3' ITR	complement (5019-5253)	235	ITR	piggyBac 3' inverted terminal repeat	Recognized by PBase transposase; DNA flanked by piggyBac 5' ITR and 3' ITR can be transposed by PBase into TTAA sites.
Ampicillin	6085-6945	861	ORF	Ampicillin resistance gene	Allows E. coli to be resistant to ampicillin.
pUC ori	7116-7704	589	Rep_origin	pUC origin of replication	Facilitates plasmid replication in E. coli; regulates high-copy plasmid number (500-700).

Note: Components added by user are listed in **bold red** text.

Vector Sequence

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   1 TTAACCCTAG AAAGATAGTC TGCGTAAAAT TGACGCATGC ATTCTTGAAA TATTGCTCTC TCTTTCTAAA TAGCGCGAAT CCGTCGCTGT GCATTTAGGA
 101 CATCTCAGTC GCCGCTTGGA GCTCCCGTGA GGCGTGCTTG TCAATGCGGT AAGTGTCACT GATTTTGAAC TATAACGACC GCGTGAGTCA AAATGACGCA
 201 TGATTATCTT TTACGTGACT TTTAAGATTT AACTCATACG ATAATTATAT TGTTATTTCA TGTTCTACTT ACGTGATAAC TTATTATATA TATATTTTCT
 301 TGTTATAGAT ATCATCAACT TTGTATAGAA AAGTTGGGCT CCGGTGCCCG TCAGTGGGCA GAGCGCACAT CGCCCACAGT CCCCGAGAAG TTGGGGGGAG
 401 GGGTCGGCAA TTGATCCGGT GCCTAGAGAA GGTGGCGCGG GGTAAACTGG GAAAGTGATG TCGTGTACTG GCTCCGCCTT TTTCCCGAGG GTGGGGGAGA
 501 ACCGTATATA AGTGCAGTAG TCGCCGTGAA CGTTCTTTTT CGCAACGGGT TTGCCGCCAG AACACAGGCA AGTTTGTACA AAAAAGCAGG CTGCCACCAT
 601 GGCAGACGAA GATCTCATCT TCCGCCTGGA AGGCGTTGAT GGCGGCCAGT CCCCCCGAGC TGGCCATGAT GGTGATTCTG ATGGGGACAG CGACGATGAG
 701 GAAGGTTACT TCATCTGCCC CATCACGGAT GACCCAAGCT CGAACCAGAA TGTCAATTCC AAGGTTAATA AGTACTACAG CAACCTAACA AAAAGTGAGC
 801 GGTATAGCTC CAGCGGGTCC CCGGCAAACT CCTTCCACTT CAAGGAAGCC TGGAAGCACG CAATCCAGAA GGCCAAGCAC ATGCCCGACC CCTGGGCTGA
 901 GTTCCACCTG GAAGATATTG CCACCGAACG TGCTACTCGA CACAGGTACA ACGCCGTCAC CGGGGAATGG CTGGATGATG AAGTTCTGAT CAAGATGGCA
1001 TCTCAGCCCT TCGGCCGAGG AGCAATGAGG GAGTGCTTCC GGACGAAGAA GCTCTCCAAC TTCTTGCATG CCCAGCAGTG GAAGGGCGCC TCCAACTACG
1101 TGGCGAAGCG CTACATCGAG CCCGTAGACC GGGATGTGTA CTTTGAGGAC GTGCGTCTAC AGATGGAGGC CAAGCTCTGG GGGGAGGAGT ATAATCGGCA
1201 CAAGCCCCCC AAGCAGGTGG ACATCATGCA GATGTGCATC ATCGAGCTGA AGGACAGACC GGGCAAGCCC CTCTTCCACC TGGAGCACTA CATCGAGGGC
1301 AAGTACATCA AGTACAACTC CAACTCTGGC TTTGTCCGCG ATGACAACAT CCGCCTGACG CCGCAGGCCT TCAGCCACTT CACTTTTGAG CGTTCCGGCC
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2101 CGTGGCCCTG GAAGTGCAAA GGCTTAATGC TCTGGACCTC GAAAAGAAAA TCGGGAAGTC CATTTTGGGG AAGGTCCATC TGGCCATGGT GCGCTACCAC
2201 GAGGGTGGGC GCTTCTGCGA GAAGGGCGAG GAGTGGGACC AGGAGTCGGC TGTCTTCCAC CTGGAGCACG CAGCCAACCT GGGCGAGCTG GAGGCCATCG
2301 TGGGCCTGGG ACTCATGTAC TCGCAGTTGC CTCATCACAT CCTAGCCGAT GTCTCTCTGA AGGAGACAGA AGAGAACAAA ACCAAAGGAT TTGATTACTT
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8101 TATGACCATG ATTACGCCAA GCTCGAAATT AACCCTCACT AAAGGGAACA AAAGCTGGTA CCTCGCGCGA CTTGGTTTGC CATTCTTTAG CGCGCGTCGC
8201 GTCACACAGC TTGGCCACAA TGTGGTTTTT GTCAAACGAA GATTCTATGA CGTGTTTAAA GTTTAGGTCG AGTAAAGCGC AAATCTTTT
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Validation by Restriction Enzyme Digestion

Cutters	Locations	Fragments (bp)
NaeI	1704, 5627	3923, 4366
NdeI	3012, 3072, 3080, 3604	60, 8, 524, 7697
ApaLI	6201, 7447	1246, 7043
ApaLI+NaeI	1704, 5627, 6201, 7447	3923, 574, 1246, 2546
ApaLI+NdeI	3012, 3072, 3080, 3604, 6201, 7447	60, 8, 524, 2597, 1246, 3854