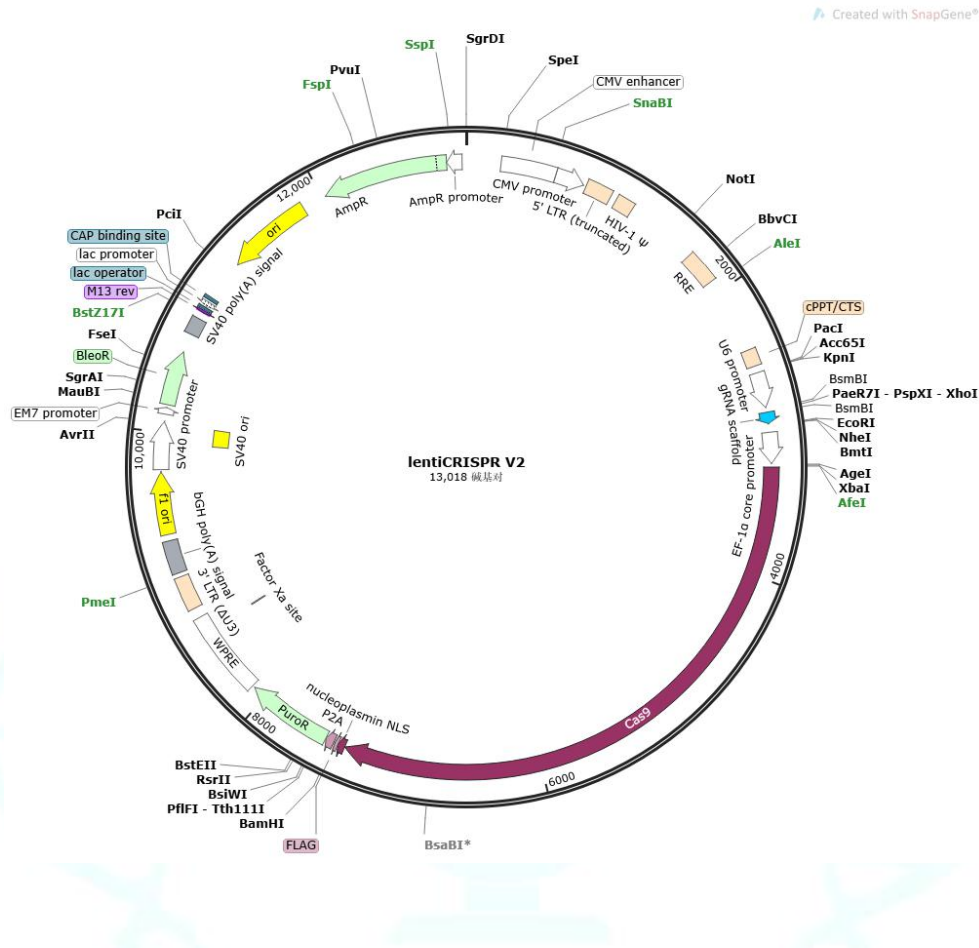


# lentiCRISPR V2 Vector Information



载体名称:	lentiCRISPR V2
质粒类型:	哺乳细胞表达载体, Lentiviral, CRISPR
表达水平:	高拷贝
启动子:	U6 promoter, EFS-NS
克隆方法:	多克隆位点, 限制性内切酶
克隆位点:	BsmBI
载体大小:	13018bp
5' 测序引物及序列:	PX330-SEQ-F: TATTTCCCATgATTCCTTCATATTTgC
3' 测序引物及序列:	EF13: CCAACTTCTCggggACTgTg
载体标签:	FLAG
载体抗性:	Amp
筛选标记:	puro, Bleo
产品目录号:	
稳定性:	瞬时表达 Transient/稳定表达 Stable
组成型/诱导型:	--
病毒/非病毒:	慢病毒
克隆菌株:	Stb13

MCS ☒:



LOCUS lentiCRISPR V2 13018 bp DNA circular SYN 31-DEC-2021  
 DEFINITION .  
 ACCESSION .  
 VERSION .  
 KEYWORDS .  
 SOURCE synthetic DNA construct  
 ORGANISM recombinant plasmid  
 REFERENCE 1 (bases 1 to 13018)  
 AUTHORS L Preston  
 TITLE Direct Submission  
 JOURNAL Exported Jun 2, 2023 from SnapGene 6.0.2  
<https://www.snapgene.com>

FEATURES Location/Qualifiers  
 source 1..13018  
 /mol\_type="other DNA"  
 /organism="recombinant plasmid"  
 enhancer 238..617  
 /label=CMV enhancer  
 /note="human cytomegalovirus immediate early enhancer"  
 /note="color: #ffffff"  
 promoter 619..817  
 /label=CMV promoter  
 /note="human cytomegalovirus (CMV) immediate early promoter"  
 /note="color: #ffffff; direction: RIGHT"  
 LTR 835..1015  
 /label=5' LTR (truncated)  
 /note="truncated 5' long terminal repeat (LTR) from HIV-1"  
 /note="color: #ffe4c4"

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misc\_feature 1062..1187  
 /label=HIV-1 Psi  
 /note="packaging signal of human immunodeficiency virus type 1"  
 /note="color: #ffe4c4"

misc\_feature 1680..1913  
 /label=RRE  
 /note="The Rev response element (RRE) of HIV-1 allows for Rev-dependent mRNA export from the nucleus to the cytoplasm."  
 /note="color: #ffe4c4"

misc\_feature 2440..2557  
 /label=cPPT/CTS  
 /note="central polypurine tract and central termination sequence of HIV-1"  
 /note="color: #ffe4c4"

promoter 2608..2848  
 /label=U6 Promoter  
 /note="RNA polymerase III promoter for human U6 snRNA"  
 /note="color: #ffffff; direction: RIGHT"

misc\_RNA 2883..2958  
 /label=gRNA scaffold  
 /note="guide RNA scaffold for the CRISPR/Cas9 system"  
 /note="color: #00ccff; direction: RIGHT"

misc\_feature 3020..3231  
 /label=EF-1-alpha core promoter  
 /note="color: #ffffff; direction: RIGHT"

CDS 3256..7359  
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 /product="Cas9 (Csn1) endonuclease from the Streptococcus pyogenes Type II CRISPR/Cas system"  
 /label=Cas9  
 /note="generates RNA-guided double strand breaks in DNA"  
 /note="color: #993366"  
 /translation="MDKKYSIGLDIGTNSVGWAVITDEYKVPSSKFKVLGNTDRHSIKK  
 NLIGALLFDSGETAEATRLKRTARRRYTRRKNRICYLQEIFSNEMAKVDDSSFFHRLEES  
 FLVEEDKKHERHPIFGNIVDEVAYHEKYPTIYHLRKKLVDSTDKADLRLIYLALAHMIK  
 FRGHFLIEGDLNPDNSDVKLFIQLVQTYNQLFEENPINASGVDAKAILSARLSKSRRL  
 ENLIAQLPGEKKNGLFGNLIASLGLTPNFKSNFDLAEDAQLQSKDYYDDDLNLLAQ  
 IGDQYADLFLAAKNLSDAILLSDILRVNTEITKAPLSASMIKRYDEHHQDLTLLKALVR  
 QQLPEKYKEIFFDQSKNGYAGYIDGGASQEEFYKFIKPILEKMDGTEELLVKLNREDLL  
 RKQRTFDNGSIPHQIHLGELHAILRRQEDFYFPLKDNREKIEKILTFRIPYYVGPLARG  
 NSRFAWMTRKSEETITPWNFEEVVDKGASQSFIERMTNFDKNLPNEKVLPKHSLLEYE  
 FTVYNELTKVKYVTEGMRKPAFLSGEQKKAIVDLLFKTNRKVTVKQLKEDYFKKIECFD"

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SVEISGVEDRFNASLGYHDLKLIKDKDFLDNEENEDILEDIVLTLTLFEDREMIEER  
LKYAHLFDDKVMKQLKRRRYTGWGRLSRKLINGIRDKQSGKTILDFLKSDFANRNF  
QLIHDDSLTFKEDIQKAQVSGQGDSLHEHIANLAGSPAIKKGLQTVKVVDELVKVMGR  
HKPENIVIEMARENQTTQKGQKNSRERMKRIEEGIKELGSQILKEHPVENTQLQNEKLY  
LYYLQNGRDMYVDQELDINRLSDYDVDHIVPQSFLKDDSIDNKVLTRSDKNRGSNDNP  
SEEVVKMKNYWRQLLNAKLITQRKFDNLTKAERGGLSELDKAGFIKRQLVETRQITKH  
VAQILDSRMNTKYDENDKLIREVKVITLKSCLVSDFRKDFQFYKREINNYHHAHDAYL  
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EITLANGEIRKRPLIETNGETGEIVWDKGRDFATVRKVLSPQVNIKKTEVQTGGFSK  
ESILPKRNSDKLIARKKDWDPKYYGGFDSPTVAYSVLVVAKEGKSKKLSVKELG  
TIMERSSEKNPIDFLEAKGYKEVKKDLIIKLPKYSLENGRKRMLASAGELQKGNE  
LALPSKYVNFYLAHYEKLKGSPEQKQLFVEQHKHYLDEIEEQISEFSKRVLAD  
ANLDKVLAYSANKHRDKPIREQAENIHLFTLTNLGAPAAFKYFDTTIDRKRYTSTKEVL  
DATLIHQSIITGLYETRIDLSQLGGD"

CDS 7360..7407  
/codon\_start=1  
/product="bipartite nuclear localization signal from nucleoplasmin"  
/label=nucleoplasmin NLS  
/note="color: #993366"  
/translation="KRPAATKKAGQAKKKK"

CDS 7408..7431  
/codon\_start=1  
/product="FLAG(R) epitope tag, followed by an enterokinase cleavage site"  
/label=FLAG  
/note="color: #cc99b2"  
/translation="DYKDDDDK"

CDS 7441..7497  
/codon\_start=1  
/product="2A peptide from porcine teschovirus-1 polyprotein"  
/label=P2A  
/note="Eukaryotic ribosomes fail to insert a peptide bond between the Gly and Pro residues, yielding separate polypeptides."  
/note="color: #cc99b2  
Cleavage site after base 7494"  
/translation="ATNFSLLKQAGDVEENPGP"

CDS 7498..8094  
/codon\_start=1  
/gene="pac from Streptomyces alboniger"  
/product="puromycin N-acetyltransferase"  
/label=PuroR

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        /note="confers resistance to puromycin"
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        /translation="TEYKPTVRLATRDDVPRAVRTLAAAFADYPATRHTVDPDRHIERV
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        QQQMEGLLAPHRPKPAWFLATVGVSPDHQKGLGSAVVLPGVEAAERAGVPAFLETS
        PRNLPFYERLGFTVTADVEVPEGPRTWCMTRKPGA"
misc_feature 8110..8698
        /label=WPRE
        /note="woodchuck hepatitis virus posttranscriptional
        regulatory element"
        /note="color: #ffffff"
CDS          complement(8581..8592)
        /codon_start=1
        /product="Factor Xa recognition and cleavage site"
        /label=Factor Xa site
        /note="color: #cc99b2"
        Cleavage site after base 8580"
        /translation="IEGR"
LTR          8770..9003
        /label=3' LTR (Delta-U3)
        /note="self-inactivating 3' long terminal repeat (LTR) from
        HIV-1"
        /note="color: #ffe4c4"
polyA_signal 9035..9259
        /label=bGH poly(A) signal
        /note="bovine growth hormone polyadenylation signal"
        /note="color: #a6acb3"
rep_origin  9305..9733
        /direction=RIGHT
        /label=f1 ori
        /note="f1 bacteriophage origin of replication; arrow
        indicates direction of (+) strand synthesis"
        /note="color: #ffff00"
promoter    9747..10076
        /label=SV40 promoter
        /note="SV40 enhancer and early promoter"
        /note="color: #ffffff; direction: RIGHT"
rep_origin  9927..10062
        /label=SV40 ori
        /note="SV40 origin of replication"
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promoter    10124..10171
        /label=EM7 promoter
        /note="synthetic bacterial promoter "

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CDS /note="color: #ffffff; direction: RIGHT"  
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 /codon\_start=1  
 /gene="Sh ble from Streptoalloteichus hindustanus"  
 /product="antibiotic-binding protein"  
 /label=BleoR  
 /note="confers resistance to bleomycin, phleomycin, and Zeocin(TM)"  
 /note="color: #ccffcc"  
 /translation="MAKLTSAVPVL TARDVAGAVEFWTDRLGFSRDFVEDDFAGVVRDD  
 VTLFISAVQDQVVPDNTLAWVWVRGLDELYAEWSEVVSTNFRDASGPAMTEIGEQPWGR  
 EFALRDPAGNCVHFVAEEQD"

polyA\_signal 10694..10815  
 /label=SV40 poly(A) signal  
 /note="SV40 polyadenylation signal"  
 /note="color: #a6acb3"

primer\_bind complement(10864..10880)  
 /label=M13 rev  
 /note="common sequencing primer, one of multiple similar variants"  
 /note="color: #a020f0; direction: LEFT"

protein\_bind 10888..10904  
 /label=lac operator  
 /bound\_moiety="lac repressor encoded by lacI"  
 /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)."  
 /note="color: #31849b"

promoter complement(10912..10942)  
 /label=lac promoter  
 /note="promoter for the E. coli lac operon"  
 /note="This reverse directional feature has 3 segments:  
     1: 10912 .. 10918 / #ffffff / -10  
     2: 10919 .. 10936 / #ffffff  
     3: 10937 .. 10942 / #ffffff / -35"

protein\_bind 10957..10978  
 /label=CAP binding site  
 /bound\_moiety="E. coli catabolite activator protein"  
 /note="CAP binding activates transcription in the presence of cAMP."  
 /note="color: #31849b"

rep\_origin complement(11266..11854)  
 /direction=LEFT

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        /label=ori
        /note="high-copy-number ColE1/pMB1/pBR322/pUC origin of
        replication"
        /note="color: #ffff00"
CDS      complement(12025..12885)
        /codon_start=1
        /gene="bla"
        /product="beta-lactamase"
        /label=AmpR
        /note="confers resistance to ampicillin, carbenicillin, and
        related antibiotics"
        /note="This feature has 2 segments:
            1: 12025 .. 12816 / #ccffcc
            2: 12817 .. 12885 / #ccffcc / signal sequence
        Cleavage site after base 12816"
        /translation="MSIQHFRVALIPFFAAFCLPVFAHPETLVKVKDAEDQLGARVGYI
        ELDLNSGKILESFRPEERFPMSTFKVLLCGAVLSRIDAGQEQLGRRIHYSQNDLVEYS
        PVTEKHLTDGMTVRELCSAAITMSDNTAANLLLTIGGPKELTAFLHNMGDHVTRLDRW
        EPELNEAIPNDERDTMPVAMATLRKLLTGELTLASRQQLIDWMEADKVGAPLLRSA
        LPAGWFIADKSGAGERGSRGIIAALGPDGKPSRIVVIYTTGSQATMDERNRQIAEIGAS
        LIKHW"
promoter complement(12886..12990)
        /gene="bla"
        /label=AmpR promoter
        /note="color: #ffffff; direction: LEFT"
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  121  gcgcgagcaa  aatttaagct  acaacaaggc  aaggcttgac  cgacaattgc  atgaagaatc
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  301  atatggagtt  ccgcgttaca  taacttacgg  taaatggccc  gcctggctga  ccgcccacg
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  421  tcattgacg  tcaatgggtg  gagtatttac  ggtaaactgc  ccacttgca  gtacatcaag
  481  tgtatcatat  gccaaagtac  cccctattg  acgtcaatga  cggtaaattg  cccgctggc
  541  attatgcca  gtacatgacc  ttatgggact  ttctacttg  gcagtacatc  tacgtattag
  601  tcatcgctat  taccatggtg  atgcggtttt  ggcagtacat  caatgggcgt  ggatagcggt
  661  ttgactcaag  gggatttcca  agtctccacc  ceattgacgt  caatgggagt  ttgttttggc
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  961  tctggttaact  agagatccct  cagacccttt  tagtcagtgt  ggaaaatctc  tagcagtggc
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1981 aataaatctc tggaacagat ttggaatcac acgacctgga tggagtggga cagagaatt  
2041 aacaattaca caagcttaat aactcctta attgaagaat cgcaaaacca gcaagaaaag  
2101 aatgaacaag aattattgga attagataaa tgggcaagtt tgtggaattg gtttaacata  
2161 acaaattggc tgtggtatat aaaattattc ataagtagat taggaggctt ggtaggttta  
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6361 tactttcttct acagcaacat catgaacttt ttcaagaccg agattaccct ggccaacggc  
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