

Figure S1

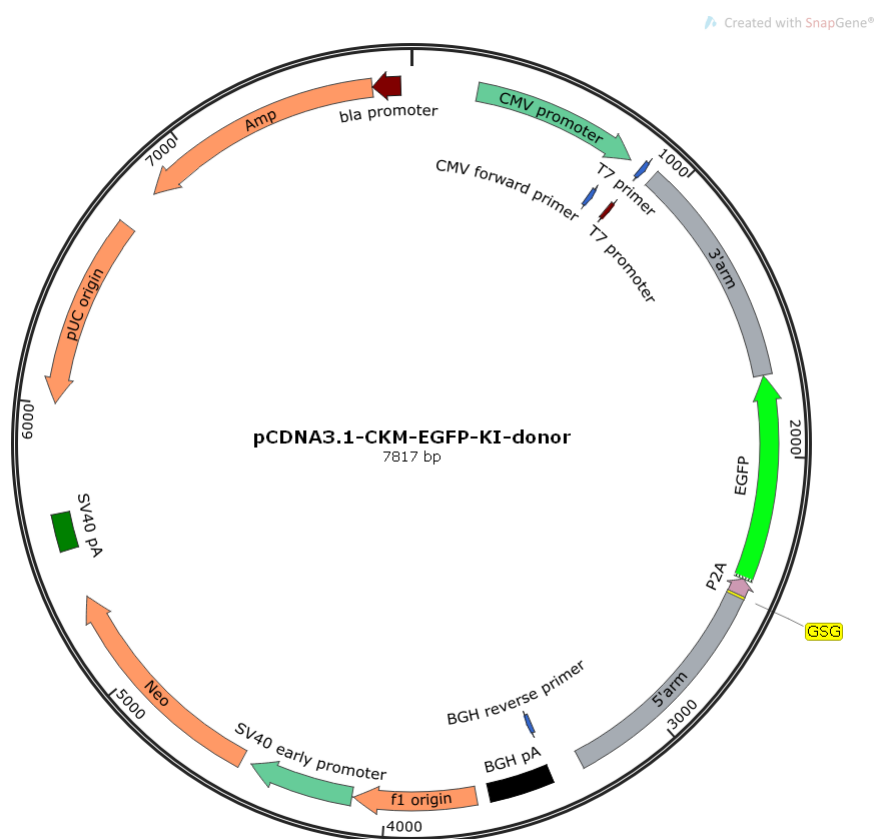


Figure S1. Vector map of targeting donor (pCDNA3.1-CKM-GFP-KI-donor).

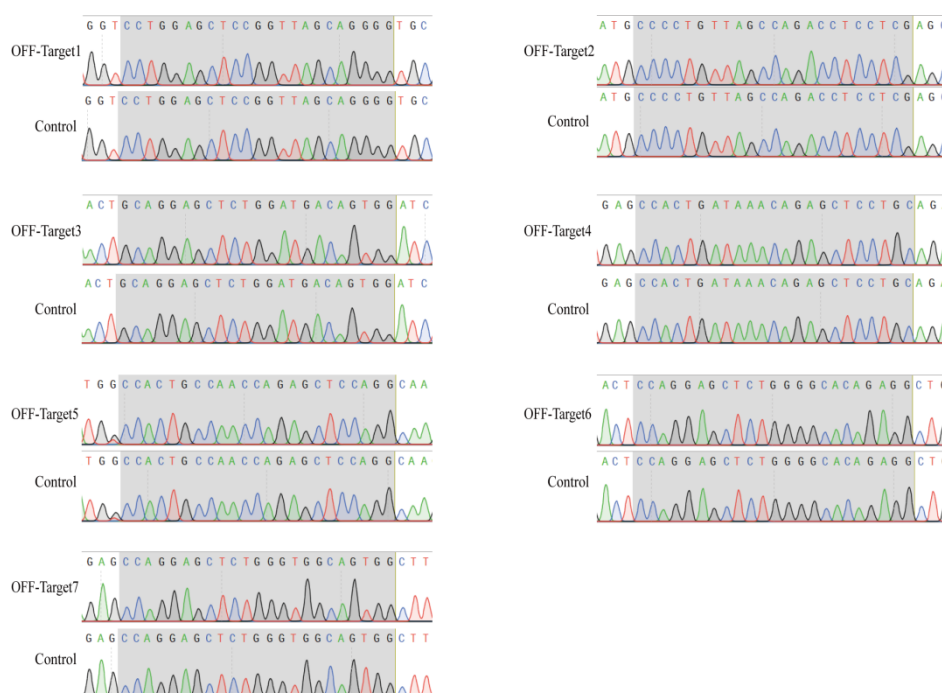
Detailed sequence of the donor vector(the sequences of homolog arms and P2A-EGFP fragments are marked in different colors corresponding to the vector map mentioned above):

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ttccgcgttacataacttaacggtaaatggccccgcttggtgaccgccaacgacccccgccattgacgtcaataa  
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ctt**ACCACAGCCACAGCAACCGGATCCTTAACCCACTGAGCAAGGCCAGGGAT**  
**TGAACCCGCAACCTCATGGTTCCTAGTCAGATTCGTTAACCACTGAGCCATG**  
**ACGGGAAGTCCCAGATATTTCTTTAAGGTGGGAATTCAGGGTGTAAGGAG**  
**CAAAAGAGTATACAGAGAGATCATGAGAAAAGAACTACAAAGATGAGCCTT**

CAGCAAATGGTATGCATTTGTTTGAAGACTTGCATATAAAGGAGAGTATTCT  
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GGGAGCCTACTTCTGGGCGGGGATCATGTGTCGTCGATGGACTGGCCTTTTTTC  
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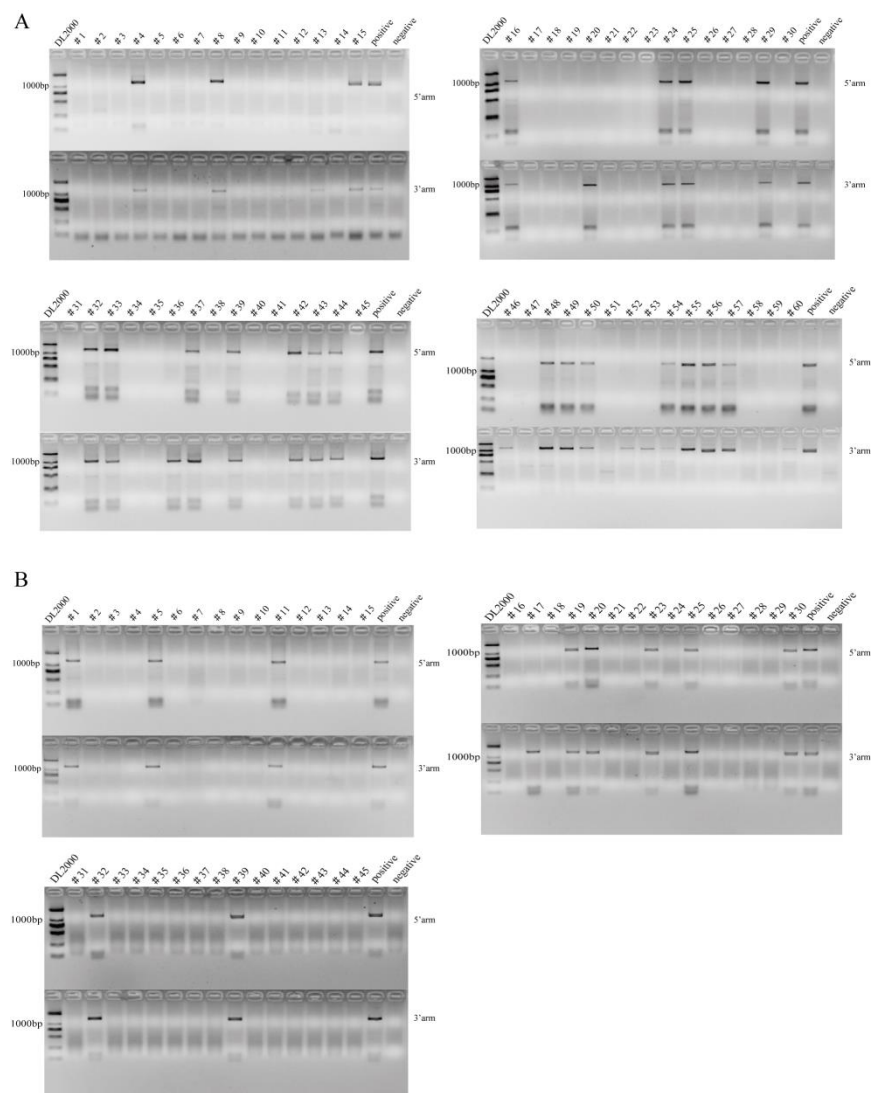
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 aaagcatgcattcaattagtcagcaaccatagtcggccctaaactccgcccattcccggccctaaactccgcccag  
 ttccgcccattctcggcccc

**Figure S2**



**Figure S2.** Sequencing information of 7 potential OFF-Target sites.

**Figure S3**



**Figure S3.** PCR amplification of homologous arm sequences of 60 pk-15 monoclonal cells(A) and 45 3D4/21 monoclonal cells(B).

**Table S1.** All primers used in this study.

Primer	Sequence (5'-3')
CKM-sgR-F	caccCCAGGAGCTCTGGTTAACAG
CKM-sgR-R	aaacCTGTTAACCAGAGCTCCTGG
CKM-offtarget1-F	ACAGCGAAGTCCACAAAGGT
CKM-offtarget1-R	ACCCACCATCCCTAAAAAGGT
CKM-offtarget2-F	CTGAGCCCCTGAGAGGTACT
CKM-offtarget2-R	AACTAACAGAGGCACGGTGG
CKM-offtarget3-F	AGACAGGGTGTACCTTTCCAT
CKM-offtarget3-R	GCACTGTAAATGGCAGAGCG
CKM-offtarget4-F	TGAAACCCAGCAAACCTGGA
CKM-offtarget4-R	GAGTTGACAGCACTGACCCA
CKM-offtarget5-F	GCCGACTTTAGGCTGTGTCT
CKM-offtarget5-R	GTGTCCAGCAAGACCACTGA
CKM-offtarget6-F	CGAGCTGCACCATTCAACAAC
CKM-offtarget6-R	ACATCAGAAGAGGCGCTCAC
CKM-offtarget7-F	GTACCAGATGGCGGTACCTT
CKM-offtarget7-R	CAGGGAGGAAGACAGACCAC
q-PCR-F	CCTCAGCAAGCACAACAACC
q-PCR-R	CCGTGTCGGTCTTGGATGAT
F1	TGATCCCCGCCCAGAAGTA
R1	GAGTCTCGGATTCCATGCAGA
F2	GCATCCCAAGTTCGAGGAGA
R2	GCTGAACTTGTGGCCGTTTAC
F3	AGATCCGCCACAACATCGAG
R3	ATGATTGACGTGGCCAACAC