Supplementary Figure 9

b

EE5 * EE6 * EE7 *

EE11 EE12 *

EI1 *

E14 *

EI5 * EI6 *

EI7 *

EI10

EI14 *

EI16 * EI17 *

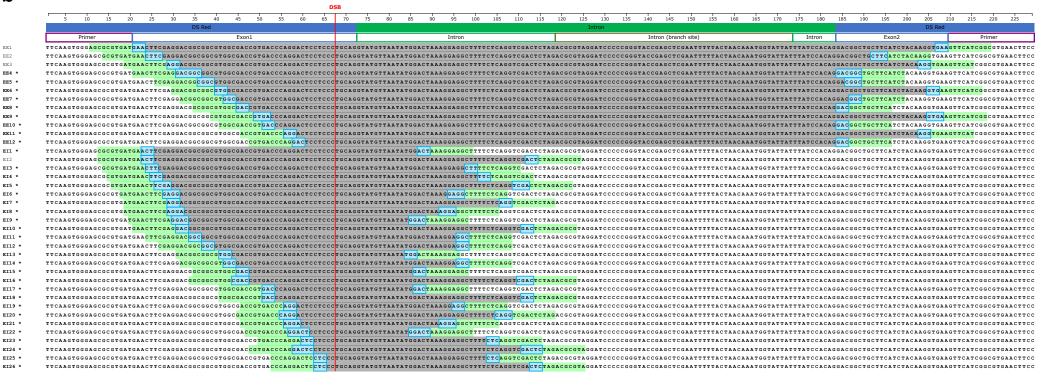
EI18 *

EI19 *

EI22

EI23 *

Microhomology scheme: Sense/pCMVΔ, sqRNA A, forward strand



Microhomology scheme: Sense/pCMVΔ, sgRNA B, reverse strand

	5 10 15 2	25 30 35 40 45	50 55	60 65 70 75	80 85	90 95	100 105	110 115	120 125 1	30 135 140	145 150 155	160 165 170	175 180 1	85 190 195	200 205 21	.0 215 22	.0 225
		Intron										DS Red					
	Primer	Primer Exon2 Intron Intron (branch site)					Intron				Exon1			Prime	er		
EE1R *	GGAAGTICAC GCCGATGAAC TICACCTTGTAGATGAAGCAGCCGTC CTGTGGATAAATAATACCATTTGTTAGTAAAAAATCCATCTGTAGAACGAGCTCCCACCGCGCGCCACCTGAAGTTCACCACGCCTCCCACTTGACATAACATACCTCCATGATCACCACGAGGAGGAGCCCTGGGCGCCGCCCCCCCC														CCACTTGAA		
EE2R *	GGAAGTTCACGCCGATGAACTTCACCTTGTAGAT SAAGCAGCCGCC CTGTGGATAAATAATACCATTTGTTAGTAAAAATTTGTTAGTAAAAAATTCGAGCTCCGCCGCCCCCCTCTGAACTTCACCCGCTCCTCTAGACCTGAAAAATAATACCTGCAGGAGGAGTCCTGGGATCCCACGCCGCCCCCCTCTGAA																
EE3R *	GGAAGTICACGCCGATGAACTICACTCTAGTGAAGAACTCCACGCCGCCCCCTCTTAGTCCATAAAAAAATAACAACTGTAGTAAAAAAATAACAACAACAACAACAACAACAACAACAACA																
EE4R *	GGAAGTTCACGCCGATGAACTTCACCTTGTAGATGAAGCA <mark>CCCTCCTTGGGATAAATAACACTTGGTAAAAAATTCGAGCCGGGGGGATCCTAGAGCCGGGGGGATCCTAGAGCCTGGAAAAAACCTGCAGAAGTTCATCACACTGGAAGTTCATCACACTGGAAGTTCATCACACTGGAAGTTCATCACACTGGAACTTCATCACACTGGAACTTCATCACACTGGAACTTCATCACACTGGAACTTCATCACACTGGAACTTCATCACACTGGAACTTCACACTGAACTTCACACTACACTACACTACACTACACTACACTACACTACACACTACACTACACACTACACACTACACACTACACACTACACACTACACACTACACACACTAC</mark>																
EE5R *	GGAAGTICACGCCGATGAACTICACCTTGTAGATGAAGCA <mark>CCCT</mark> CTGTGGATAAATAATAACCATTTGTTAGTAAAAATACCGCGCCCCCCGGGGGGATCCTACGCGCTCTAGAGTCGACCTGAAATCATAACCTACTTAGTAAATAACATACCTGCGGGTCACGGGTCCCGCGCCCTCCGAAGTTCATCACGCGCTCCCACTGAA																
EE6R *	GGAAGTICACGCCGATGAACTTCACCTTGTAGATGAAGCACCCCCCTCGGATGAAATAATAATACCATTTGTTAGTAAAAATAATACCATTTGTTAGTAAAAATACCACCGCGCGCCCTCCCACTTGAA																
EE7R *	GGAAGTTCACGCCGATGAAC	TTCACCTTGTAGATGAAGCA <mark>GCC</mark> GTC	CTGTGGATAA	ATAATACCATTTGTTAGTA	AAAATTCGAGCT	CGGTACCCGG	GGGGATCCTAC	GCGTCTAGAG!	CGACCTGAGAA	AAGCCTCCTTTAG	GTCCATATTAACATA	CCTGCAGGGAGGAG	TCCTGGGTCACGGT	CGCCACGCCGCCGT	CCTCGAAGTTCA	ATCACGCGCTC	CCACTTGAA
EE8R *	GGAAGTTCACGCCGATGAAC	TTCACCTTGTAGA <mark>TGAAGCAGCC<mark>GTC</mark></mark>	CTGTGGATAA	ATAATACCATTTGTTAGTA	AAAATTCGAGCT	CGGTACCCGG	GGGGATCCTAC	GCGTCTAGAG!	CGACCTGAGAA	AAGCCTCCTTTAG	GTCCATATTAACATA	CCTGCAGGGAGGAG	TCCTGGGTCACGGT	CGCCACGCCGCCGT	CCTCGAAGTTCA	ATCACGCGCTC	CCACTTGAA
EE9R *	GGAAGTTCACGCCGATGAAC	TTCACCTTGTAGATGAAGCAGCCGTC	CTGTGGATAA	ATAATACCATTTGTTAGTA	AAAATTCGAGCT	CGGTACCCGG	GGGATCCTAC	GCGTCTAGAG!	CGACCTGAGAA	AAGCCTCCTTTAG	GTCCATATTAACATA	CCTGCAGGGAGGAG	TCCTGGG TCAC GGT	CGCCACGCCGCCGTC	CCTCGAAGTTCA	ATCACGCGCTC	CCACTTGAA
EE10R *	GGAAGTTCACGCCGATGAAC	TTCACCTTGTAGA <mark>TGAAGCAGCC</mark> GTC	CTGTGGATAA	ATAATACCATTTGTTAGTA	AAAATTCGAGCT	CGGTACCCGG	GGGGATCCTAC	GCGTCTAGAG!	CGACCTGAGAA	AAGCCTCCTTTAG	GTCCATATTAACATA	CCTGCAGGGAGGAG	TCCTGGGTCACGGT	CGCCACGCCGCCGT	CCTCGAAGTTCA	ATCACGCGCTC	CCCACTTGAA
EE11R *	GGAAGTTCACGCCGATGAAC	TTCACCTTGTAGATGAAGCAGCCGTC	CTGTGGATAA	ATAATACCATTTGTTAGTA	AAAATTCGAGCT	CGGTACCCGG	GGGGATCCTAC	GCGTCTAGAG!	CGACCTGAGAA	AAGCCTCCTTTAG	GTCCATATTAACATA	CCTGCAGGGAGGAG	TCCTGGGTCACGGT	CGCCACGCCGCCGT	CCTCGAAGTTCA	ATCACGCGCTC	CCACTTGAA
EE12R *	GGAAGTTCACGCCGATGAAC	TTCACCTTGTAGATGAAGCAGCC <mark>GTC</mark>	CTGTGGATAA	ATAATACCATTTGTTAGTA	AAAATTCGAGCT	CGGTACCCGG	GGGATCCTAC	CGTCTAGAGT	CGACCTGAGAA	AAGCCTCCTTTAG	GTCCATATTAACATA	CCTGCAGGGAGGA	TCCTGGGTCACGGT	CGCCACGCCGCCGT	CCTCGAAGTTCA	ATCACGCGCTC	CCACTTGAA
EE13R *	GGAAGTTCACGCCGATGAAC	TTCACCTTGTAGATGAA <mark>GCAG</mark> CCGTC	CTGTGGATAA	ATAATACCATTTGTTAGTA	AAAATTCGAGCT	CGGTACCCGG	GGGGATCCTAC	GCGTCTAGAG!	CGACCTGAGAA	AAGCCTCCTTTAG	GTCCATATTAACATA	CCTGCAGGGAGGAG1	TCCTGGGTCACGGT	CGCCACGCCGCCGT	CCTCGAAGTTCA	ATCACGCGCTC	CCACTTGAA
EI27R *	GGAAGTTCACGCCGATGAAC	TTCACCTTGTAGATGAAGCAGCC <mark>GTC</mark>	CTGTGGATAA	ATAATACCATTTGTTAGTA	AAAATTCGAGCT	CGGTACCCGG	GGGGATCCTAC	CGTCTAGAGT	CGACCTGAGAA	AAGCCTCCTTTA	GTC CATATTAACATA	CCTGCAGGGAGGAG	TCCTGGGTCACGGT	CGCCACGCCGCCGT	CCTCGAAGTTCA	ATCACGCGCTC	CCACTTGAA
EI28R	GGAAGTTCACGCCGATGAA	TTCACCTTG <mark>TAG</mark> ATGAAGCAGCCGTC	CTGTGGATAA	ATAATACCATTTGTTAGTA	AAAATTCGAGCT	CGGTACCCGG	GGGGATCCTAC	CGTCTAGAGT	CGACCTGAGAA	AAGCCTCCTTTAG	GTCCATATTAACATA	CCTGCAGGGAGGAG	TCCTGGGTCACGGT	CGCCACGCCGCCGTC	CCTCGAAGTTCA	ATCACGCGCTC	CCACTTGAA
EI29R *	GGAAGTTCACGCCGATGAAC	TTCACCTTGTAGATGAAGCAGCCGTC	CTGTGGATAA	ATAATACCATTTGTTAGTA	AAAATTCGAGCT	CGGTACCCGG	GGGGATCCTAC	CGTCTAGAGT	CGACCTGAGAA	AAGCCTCCTTTAG	GTCCATAT TAACATA	CCTGCAGGGAGGAG	TCCTGGGTCACGGT	CGCCACGCCGCCGTC	CCTCGAAGTTCA	ATCACGCGCTC	CCACTTGAA
EI30R *	GGAAGTTCACGCCGATGAAC	TTCACCT TGTAGATGAAGCAGCCGTC	CTGTGGATAA	ATAATACCATTTGTTAGTA	AAAATTCGAGCT	CGGTACCCGG	GGGGATCCTAC	CGTCTAGAGT	CGACCTGAGAA	AAGCCTCCTTTAG	GTCCATATTAACATA	CCTGCAGGGAGGAG	TCCTGGGTCACGGT	CGCCACGCCGCCGT	CCTCGAAGTTCA	ATCACGCGCTC	CCACTTGAA
EI31R *	GGAAGTTCACGCCGATGAAC	TTCACCTTGTAGATGAAGC <mark>AGCC</mark> GTC	CTGTGGATAA	ATAATACCATTTGTTAGTA	AAAATTCGAGCT	CGGTACCCGG	GGGGATCCTAC	CGTCTAGAGT	CGACCTGAGAA	AAGCCTCCTTTAG	GTC CATATTAACATA	CCTGCAGGGAGGAG	TCCTGGGTCACGGT	CGCCACGCCGCCGT	CCTCGAAGTTCA	ATCACGCGCTC	CCCACTTGAA
EI32R *	GGAAGTTCACGCCGATGAAC	TTCACCTTGTAGATG <mark>AAGC</mark> AGCCGTC	CTGTGGATAA	ATAATACCATTTGTTAGTA	AAAATTCGAGCT	CGGTACCCGG	GGGGATCCTAC	CGTCTAGAGT	CGACCTGAGAA	AAGC CTCCTTTAG	GTCCATATTAACATA	CCTGCAGGGAGGAG	TCCTGGGTCACGGT	CGCCACGCCGCCGTC	CCTCGAAGTTCA	ATCACGCGCTC	CCACTTGAA
EI33R *	GGAAGTTCACGCCGATGAAC	TTCACCTTGTAGAT <mark>GAA</mark> GCAGCCGTC	CTGTGGATAA	ATAATACCATTTGTTAGTA	AAAATTCGAGCT	CGGTACCCGG	GGGGATCCTAC	CGTCTAGAGT	CGACCTGAGAA	AAGCCTCCTTTAG	GTCCATATTAACATA	CCTGCAGGGAGGAG	TCCTGGGTCACGGT	CGCCACGCCGCCGT	CCTCGAAGTTCA	ATCACGCGCTC	CCACTTGAA
EI34R *	GGAAGTTCACGCCGATGAAC	TTCACCTTGT <mark>AGA</mark> TGAAGCAGCCGTC	CTGTGGATAA	ATAATACCATTTGTTAGTA	AAAATTCGAGCT	CGGTACCCGG	GGGGATCCTAC	CGTCTAGAGT	CGACCTGAGAA.	AAGCCTCCTTTAG	GTCCATATTAACATA	CCTGCAGGGAGGAG	TCCTGGGTCACGGT	CGCCACGCCGCCGTC	CCTCGAAGTTCA	ATCACGCGCTC	CCACTTGAA
EI35R *	GGAAGTTCACGCCGATGAAC	TTCACCTTGTAGA <mark>TGA</mark> AGCAGCCGTC	CTGTGGATAA	ATAATACCATTTGTTAGTA	AAAATTCGAGCT	CGGTACCCGG	GGGGATCCTAC	CGTCTAGAGT	CGACCTGAGAA:	AAGCCTCCTTTAG	GTCCATATTAACATA	CCTGCAGGGAGGAG	TCCTGGGTCACGGT	CGCCACGCCGCCGTC	CCTCGAAGTTCA	ATCACGCGCTC	CCACTTGAA
EI36R *	GGAAGTTCACGCCGATGAAC	TTCACCTTGTAGATGAAGCAGCCGTC	CTGTGGATAA	ATAATACCATTTGTTAGTA	AAAATTCGAGCT	CGGTACCCGG	GGGGATCCTAC	CGTCTAGAGT	CGACCTGAGAA	AAGCCTCCTTTAG	GTCCATATTAACATA	CCTGCAGGGAGGAG	TCCTGGGTCACGGT	CGCCACGCCGCCGTC	CCTCGAAGTTCA	ATCACGCGCTC	CCCACTTGAA
EI37R *		TTCACCTTGTAGATGAAGCAGCC <mark>GTC</mark>										CCTGCAGGGAGGAG	TCCTGGGTCACGGT	CGCCACGCCGCCGTC	CCTCGAAGTTCA	ATCACGCGCTC	CCACTTGAA
EI38R *	GGAAGTTCACGCCGATGAA	TTCACCTTG <mark>TAGA</mark> TGAAGCAGCCGTC	CTGTGGATAA	ATAATACCATTTGTTAGTA	AAAATTCGAGCT	CGGTACCCGG	GGGGATCCTAC	CGTC TAGAGT	CGACCTGAGAA	AAGCCTCCTTTAG	GTCCATATTAACATA	CCTGCAGGGAGGAG	TCCTGGGTCACGGT	CGCCACGCCGCCGTC	CCTCGAAGTTCA	ATCACGCGCTC	CCACTTGAA