

Table S1 - Cas9-HyPB Insertions

chromosome	start	end	coverage
chr5	179698575	179699865	14001
chr12	96582102	96582806	298
chr14	22546419	22548622	248
chr3	157115369	157116050	223
chr16	4957614	4957864	136
chr1	161531850	161531957	107
chr8	135004345	135005053	80
chr1	225555203	225555305	37
chr3	8751470	8752277	32
chr6	36444288	36444746	28
chr13	93826233	93826603	28
chr1	242746873	242747221	26
chr7	80847204	80847901	22
chr6	85564695	85565088	12
chr17	55294059	55294212	10
chr5	148681697	148681824	5
chr12	92184880	92184956	4
chr2	140344550	140344733	3
chr16	76219415	76219499	3
chr1	115811941	115812071	3
chr7	64815366	64815823	2
chr5	92337266	92337425	2
chr5	165831936	165832275	2
chr3	61645933	61646086	2
chr14	103350322	103350510	2
chr8	21963318	21963403	1
chr7	9853848	9853953	1
chr6	39567223	39567313	1
chr6	23372168	23372298	1
chr6	154838047	154838169	1
chr6	142103351	142103522	1
chr6	108304356	108304723	1
chr5	158563784	158564117	1
chr5	137841223	137842721	1
chr4	86962032	86962275	1
chr3	9724505	9724682	1
chr3	61743770	61743916	1
chr3	177344741	177344911	1
chr21	33683469	33683841	1
chr2	60533681	60533871	1
chr2	171524827	171525067	1
chr2	148456848	148457033	1
chr19	55115755	55115842	1
chr19	4246692	4246943	1
chr17	42461435	42461612	1

Table S2 - Primer sequences

PRIMERS USED FOR GUIDEseq EXPERIMENTS				
Adaptor sequence	P5_1	AATGATACGGCGACCACCGAGATCTA		
	P5_2	AATGATACGGCGACCACCGAGATCTACAC		
LTR	LTR3_GSP1	GGATCTCGACGCTCTCCCT tgtgactctggttaactagagatcc		
	LTR3_GSP2	CCTCTCTATGGGCAGTCGGTGA tcagacccttttagtcagtggtg		
PRIMERS USED FOR INSERTseq EXPERIMENTS				
target payload	primer	sequence		
Adaptor sequence	ps_P51_F	T*T*T*C*TGTTGGTGCTGATATTGC AATGATACGGCGACCACCGAGATCTACAC		
	PBK_P52_F	TTTCTGTTGGTGCTGATATTGC AATGATACGGCGACCACCGAGATCTACAC		
LTR	ps_LTR3'_GSP1_t1	g*c*c*t*tgagtgcttcaagtagtgt		
	PBK_LTR3'_GSP2	ACTTGCCTGTCGCTCTATCTTC gtaactagagatccctcagacccttt		
PB	ps_PB_3_ISP1	T*T*C*G*CGCTATTTAGAAAGAGAG		
	PBK_PB3'_GSP2	ACTTGCCTGTCGCTCTATCTTC GAGCAATATTTCAAGAATGCATGC		
rAAV	ps_AAV_ITR_ISP1	C*C*C*T*AGTGATGGAGTTGGCCAC		
	PBK_AAV_ITR_ISF	ACTTGCCTGTCGCTCTATCTTC CCACTCCCTCTCTGCGCGCTC		
qPCR/ddPCR primers				
SYBR-Psi_Fw	tgaaagcgaaagggaaaccag			
SYBR-Psi_Rv	CACCCATCTCTCTCCTTCTAGCC			
SYBR-RNaseP_Fw	ggagtgaggaggatgtgaa			
SYBR-RNaseP_Rv	ATTGAGGGCACTGGAAATTG			
SYBR-AAV-GFP-F	GCCTCTTTGCACCATTCTAAAG			
SYBR-AAV-GFP-R	CAAAAGGGCCTAGCTTGGAC			

Table S3 - Unidentified insertions

Chromosome	position
chr1	108218939
chr9	41347993
chr9	61444266
chr13	4593273
chr13	7432794
chr15	16222762
chr16	41728163
chr17	18456172
chr21	4694203
chr22	12305073
chrX	60426548
chr1	149245724
chr1	222491149
chr4	51665128
chr5	49151538
chr5	181345073
chr9	41875999
chr11	52152525
chr13	610232
chr13	2168261
chr15	16802453
chr16	21899377
chr16	41907850
chr16	90243219
chrX	91544223
chrX	115824090
chr1	123802883
chr1	127967760
chr1	141347454
chr6	112816545
chr11	51840539
chr14	3668770
chr21	7036551
chr22	7997535
chrX	62211393
chrY	38970872
chrY	51364199
chrY	52162792
chr2	91015069
chr2	96019862
chr8	77548
chr9	44799078
chr9	60352836
chr15	14197174
chr21	1881234
chrX	52941260
chrY	37617613

Table S3 - Unidentified insertions

chrY	52255224
chr1	127680019
chr3	92353009
chr16	15202776
chr16	42643590
chr17	47481890
chr18	15305063
chr21	8753930
chrX	92841383
chr1	138005042
chr1	138084966
chr15	18410856
chr16	37535769
chr22	14158363
chrX	30390
chrY	33560302
chrY	37438884
chrY	50544075
chr1	131663063
chr14	15131023
chr18	17159518
chr22	3212148
chr22	6488733
chrY	24939708
chr1	129862871
chr6	58677426
chr9	46265678
chr13	14557939
chr14	11221294
chr14	19045841
chr15	6423420
chr16	90200883
chr17	46667816
chrX	61363867
chrY	46599178
chr2	87175946
chr9	43398688
chr13	113700952
chr14	373771
chr15	5406639
chr22	9915341
chr1	13305867
chr2	175486317
chr9	44479515
chr10	50103603
chr13	2465844
chr13	7011404
chr14	14466289

Table S3 - Unidentified insertions

chr15	21565559
chr17	18405528
chr21	1504519
chr21	11721287
chrX	107159080
chrX	153292669

