

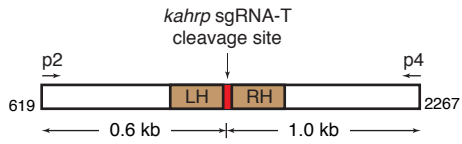
Efficient CRISPR/Cas9-mediated genome editing in *P. falciparum*

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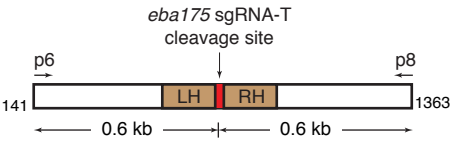
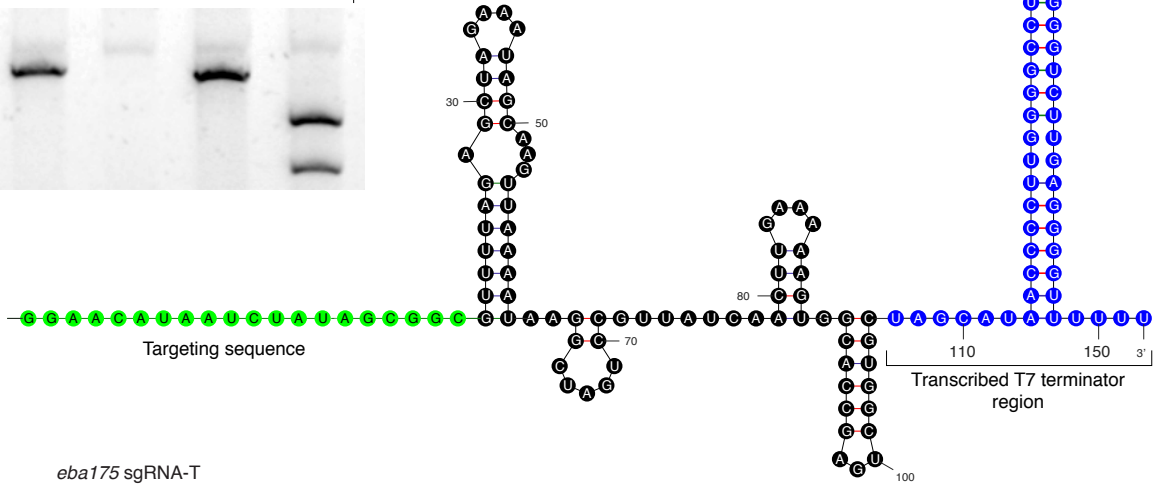
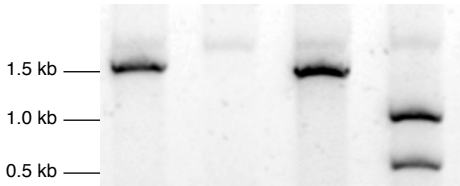
List of supplementary information

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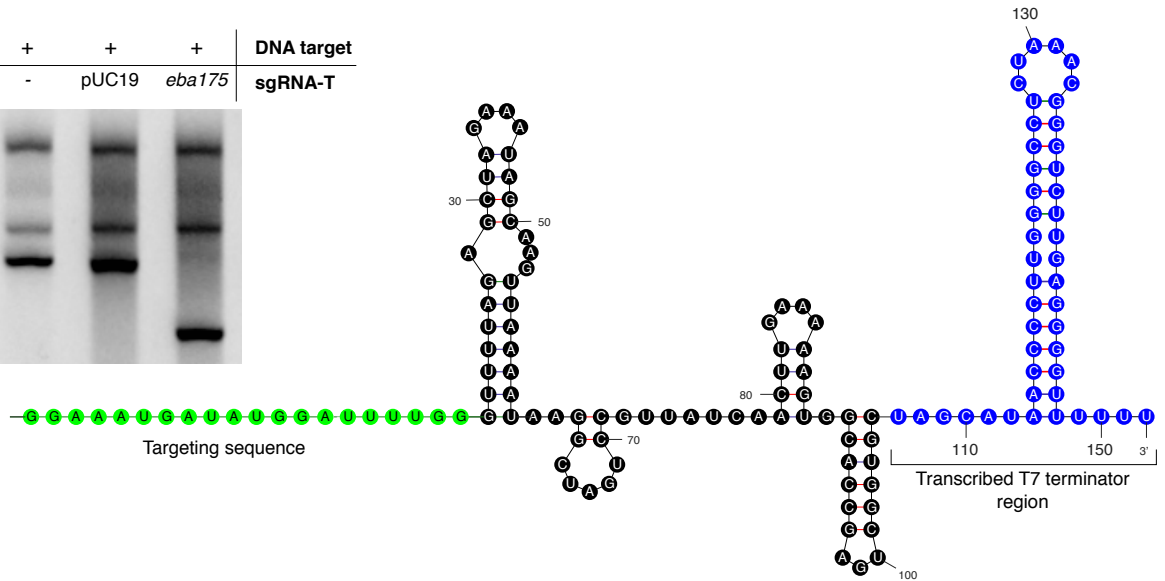
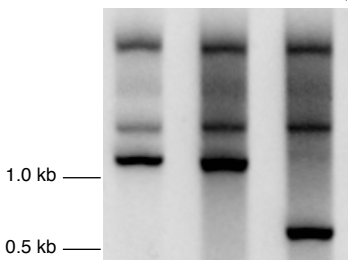
kahrp sgRNA-T

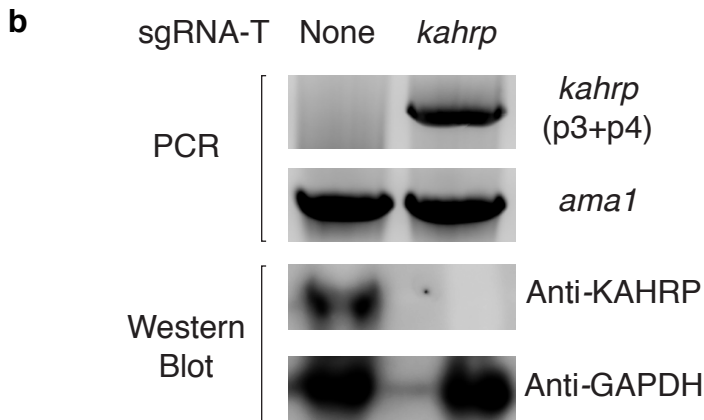
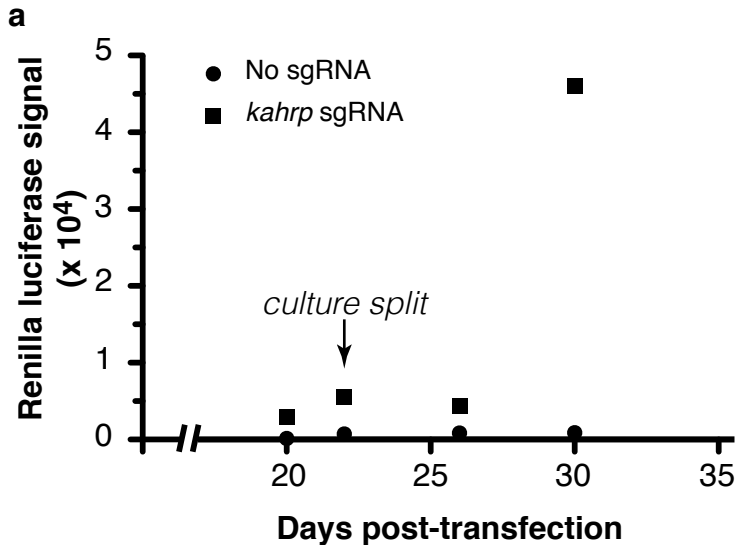
		DNA target		sgRNA-T
+	-	+	+	
-	<i>kahrp</i>	pUC19	<i>kahrp</i>	



eba175 sgRNA-T

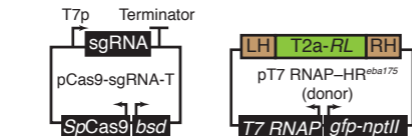
		DNA target		sgRNA-T
+	+	+	+	
-	pUC19	<i>eba175</i>		





Supplementary Figure 3

a

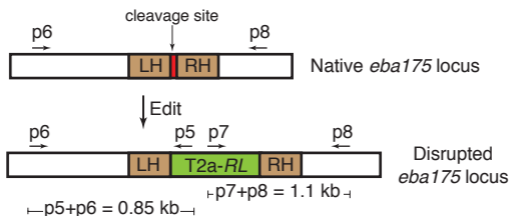


pCas9-*eba175* sgRNA (test)
pCas9-pUC19 sgRNA (control)

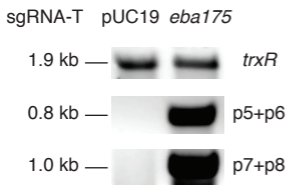
***eba175* sgRNA sequence:**

⁷⁴²GGAAATGATATGGATTTTGGAGG⁷⁶⁴

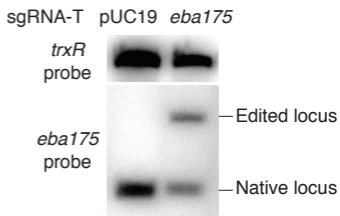
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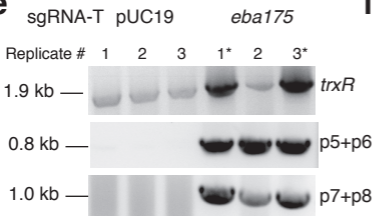
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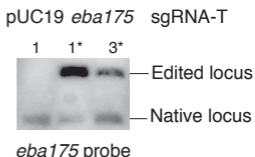
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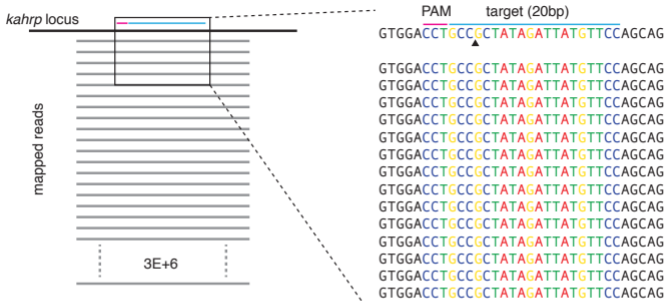
e



f



Supplementary Figure 4



	Mutation	sgRNA- <i>kahrp</i>	sgRNA- <i>pUC</i>
Missense	# indels	38	26
	Mean indel length	-2.4	-2.1
	Length StDev	3.4	4.6
Sense	# indels	1394	1179
	Mean indel length	-0.9	-1.0
	Length StDev	1.0	0.9
	# Reads	3.6E+6	3.1E+6
	Indel frequency	3.9E-4	3.9E-4

Supplementary Table 1. Summary of primer and sgRNA sequences used in this study.

Description	Sequence	Notes
sgRNA targeting sequences		
<i>eba175</i>	ggaaatgatatggatttgg	
<i>kahrp</i>	ggaacataatctatagcggc	
<i>pUC19</i> control	gggactcaaccaagtcattc	
<i>kahrp</i> locus PCR confirmation		
<i>p1</i>	aacatgctgccataaataagaag	RLuc internal-Reverse <i>kahrp</i> upstream of homologous region-
<i>p2</i>	caaaagcaacatgaacacca	Forward
<i>p3</i>	agacatgtaccacatgtggaggtagtggtgaaggtagagg	RLuc internal-Forward <i>kahrp</i> downstream of homologous
<i>p4</i>	gctcctgtagttgaacctgc	region-Reverse
<i>eba175</i> locus PCR confirmation		
<i>p5</i>	aacatgctgccataaataagaag	RLuc internal-Reverse <i>eba175</i> upstream of homologous region-
<i>p6</i>	gaaatatggaaatgttcaaaaaactg	Forward
<i>p7</i>	gatgaatggcctgatattgaagaag	RLuc internal-Forward <i>eba175</i> downstream of homologous
<i>p8</i>	ctaaatcaatatgttcacgctttcc	region-Reverse
<i>trxR</i> control		
Forward	aaatatatacacacacctaataacttacaagtatcctaggaaa aatgaacaatgtaattt	

Reverse tttaatctattattaaataaaattaaatgggggtacccgcggttatc
cacattttccacccc

**Target DNA synthesis for *in vitro*
Sp Cas9 cleavage assay**

<i>kahrp</i> _Forward	caaaagcaacatgaacacca	Same as <i>p2</i>
<i>kahrp</i> _Reverse	gctcctgtagtgaacctgc	Same as <i>p4</i>
<i>eba175</i> _Forward	gaaatattggaaatgtcaaaaaactg	same as <i>p6</i>
<i>eba175</i> _Reverse	ctaaatcaatattgttcacgctttcc	same as <i>P8</i>

qPCR primers

BSD_Forward	gctgtccatcactgtccttc
BSD_Reverse	tggcaacctgacttgtatcg
RLuc_Forward	agacaagatcaaggccatcg
RLuc_Reverse	accattttctcgcctcttc

**Probe synthesis for Southern blot
analysis**

<i>kahrp</i> _Forward	gtgttaaagaaaaggagaaaagc
<i>kahrp</i> _Reverse	ctgcagtagtacttgccttttag
<i>eba175</i> _Forward	caaaatattgtgattgtaacatac
<i>eba175</i> _Reverse	atcattttgtttattcctgtg
<i>trxR</i> _Forward	aaatatatacacacactaaaacttacaagtatcctaggaaa aatgaacaatgtaattt
<i>trxR</i> _Reverse	tttaatctattattaaataaaattaaatgggggtacccgcggttatc cacattttccacccc